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ABSTRACT

An evaluation was made of computer assisted instruction on human relations skills implemented on the PLATO IV computer system. These materials had been devised for use by company commanders (CCs) at Naval Recruit Training Commands (RTCs). A substantial improvement on the part of CCs, and recruits of CCs undergoing this instruction, was found. Also, case study scenario-based materials were implemented on PLATO IV for complementary training in interpersonal skills. (Author)

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EVALUATION OF HUMAN RELATIONS TRAINING PROGRAMS

Bolt Beranek and Newman Inc.
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FINAL REPORT FOR PERIOD APRIL 1975 - OCTOBER 1976

JANUARY 1977

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20. ABSTRACT (*Continue on reverse side if necessary and identify by block number*)

An evaluation was made of computer assisted instruction on human relations skills implemented on the PLATO IV computer system. These materials had been devised for use by company commanders (CCs) at Naval Recruit Training Commands (RTCs) and were tested at the Orlando and San Diego RTCs. A substantial improvement on the part of CCs, and recruits of CCs undergoing this instruction, was found. Also, case study scenario-based materials were implemented on PLATO IV for complementary training in interpersonal skills.

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SUMMARY AND RECOMMENDATIONS

Research efforts at the Orlando Recruit Training Command (RTC) and at the San Diego Recruit Training Command have investigated the possible use of the interpersonal skills for company commanders (CCs) at Naval Recruit Training Commands. The approaches used were complementary, the San Diego work assessed the relationship between attitudes and specific performance measures and wrote materials to inculcate directly those attitudes found to be most important. The materials produced by the research at the Orlando RTC identified a set of behaviors and behavioral attributes and integrated these behaviors and attributes into specific RTC situations. The work reported here is largely an evaluation of these materials, extending the preliminary evaluations already performed.

The Computer-based Instruction (CBI) materials described above were administered to both experienced CCs and those with no prior experience as CCs at both the San Diego and Orlando RTCs. The measures generated within the materials themselves were augmented by a variety of others derived from both past and subsequent performance. Extensive questionnaires administered to the recruits of CCs in our experiment were found to be of particular value. The experimental design employed at Orlando was essentially completed; due to difficulties with both subject availability and equipment problems, the design at San Diego was only partially completed. For the Orlando results there is evidence for improvement in company performance as a result of the training if level of motivation of the CC is taken into account. The training appears to have improved company performance at San Diego independent of CC motivation level. Most striking are the differences between recruits of CCs who have been exposed to the Orlando-based PLATO materials and recruits of control CCs. Nearly all measures of CC performance and recruit morale as measured by the recruit questionnaires strongly supported this conclusion. Less conclusive results were derived for the San Diego materials. Results for San Diego CCs are much weaker because of partial data but also indicate that the Orlando materials have a favorable effect on CC performance.

The remainder of our effort was spent in generating case-study based CBI materials on the PLATO IV System to demonstrate the utility of case study techniques. Such materials were implemented on PLATO IV and evaluated by RTC personnel but there was neither sufficient time nor subjects to include them in a formal experimental design to evaluate them formally.

The following are the major recommendations based on the results of this effort.

a. The computer-based programs should be implemented at an RTC for training and evaluating CCs and for more extensive tests, demonstrations, and development.

b. Other applications of the computer system at RTCs should be investigated.

c. An empirical system for systematically defining and validating all RTC programs needs to be developed and used on a continuing basis to help assure the RTC operation is maximally efficient and effective. This system should relate success criteria (obtained from RTC as well as post-RTC duty assignments of recruits) with aspects of the RTC operation. Recruit Training Command operations should be maintained, modified, or deleted in accordance with their contribution to the success criteria. Until such a system is instituted, the improvement of RTC will be haphazard and justification of its programs will be based on little more than guesses and intuition and subject to much skepticism.

d. The contribution of the present programs in their current form and of the computer capabilities in other applications should be assessed in relation to these success criteria.

PREFACE

Computer-based training programs for recruit company commanders (CCs) have been developed over the past four years by the Naval Training Equipment Center (NAVTRAEQUIPCEN) in conjunction with the Navy Personnel Research and Development Center. This report documents the past year's efforts to improve the programs and the fourth in a series of in-the-field evaluations of these programs.

This fourth evaluation confirmed the finding of the previous three that the training improved the on-the-job performance of CCs. Another important finding of the present experiment, which also was supported by the earlier investigations, is that certain characteristics of recruits were improved as an indirect result of the training provided to CCs. These improvements in recruits were indicated by measures of their morale, attitudes, and perceptions and, more concretely, by their competitive scores and attrition rates. Many additional findings supporting the value of the training are presented in this and the other reports from this project.

Current (Fiscal Year 1977) efforts involve updating, extending, and expanding the training programs to meet current Recruit Training Command (RTC) requirements. Additionally, the means for implementing the training materials are being changed from those of the PLATO IV system to a stand-alone minicomputer graphics system. This version of the training is to be tested at RTC, Orlando in summer of 1977.

Further efforts to develop and evaluate programs for enhancing interpersonal communication and relationships are recommended for CCs as well as for other critical positions in the military. The benefits of the present programs, although appreciable, still are considered to be only exemplary applications of a computer-based training capability at RTCs. Investigations are needed to determine the extent to which a computer-based capability can contribute, over the long run and in diverse applications, to the training efficiency of the organization.

Many people at the RTCs, Orlando and San Diego, were a great help in this current effort. Most notable for their close association, interest, and contributions were FTCC Senior Chief Merkely and LCDRs Wolven and Hearn at San Diego, and CWO-4 Kirst, LCDR Sullivan, and LT Bassett at Orlando. Also of inestimable value was the eager cooperation of the CCs who participated in this research.

Many BBN people contributed substantially to the work described in this report. Joe Berkovitz designed and implemented the statistical analysis package on PLATO used in our evaluation. Adam Pepper and Gina Fiering performed most of the data entry. Don Brown contributed most of the experimental design. Wallace Feurzeig created most of the design for the case-study scenario on the PLATO system. Charlene Long and Glenn Jones contributed substantially to the assessment and suggested modifications to existing Orlando and San Diego CAI materials. John Thelen administered that part of the experiment performed at the San Diego RTC.

The typing and editorial aspects of report preparation were performed by Pearl Stockwell.

At NAVTRAEQUIPCEN, Marty Smith is credited with many aspects of computer programming and George Romot provided liaison between NAVTRAEQUIPCEN and RTC, Orlando, as well as aiding in general project functions.

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SECTION I

INTRODUCTION

The Navy has a long tradition of emphasizing leadership and management training for its personnel. This training emphasis is based in part on the belief that influences among people are some of the most critical concerns facing the Navy. The recognition that human relations skills are critical to mission success is widespread and is perpetuated by statements such as those by Secretary of Defense Donald Rumsfeld made in his presentation to the 1976 graduating class of the U. S. Naval Academy as follows: "The most demanding and rewarding challenge will be in directing others. That task, so vital to success in carrying out the missions of our armed forces, is not an easy one. It becomes your responsibility - as officers - to inspire and to convey the importance of individual contributions to the overall mission. This can only be done by knowing how to listen carefully and observe keenly - to understand others. It calls for an appreciation of the requirements of your own work, and moreover, the needs of those you lead."

In response to the generally acknowledged priority of the interpersonal skills area, a project was initiated early in 1973 to determine the feasibility and desirability of applying some of the more advanced technology of computer-based instruction (CBI) to improving such skills. CBI technology typically has been reserved for training of more technical skills (e.g., piloting), whereas similar benefits should be expected for more affective domains. The PLATO IV computer-based training system[1] served as a basis for this application. In the process of demonstrating the value of CBI for human-relations training, a primary project goal of evaluating the peculiar characteristics of the PLATO IV system for such instruction could be accomplished. Different approaches to this instruction have been developed and evaluated by the Universities of Illinois and Michigan and the

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[1] Meller, David V., Using PLATO IV, CERL, University of Illinois, Urbana, October 1975.

Naval Training Equipment Center in cooperative and coordinated efforts[2,3,4,5]. This report documents an effort to improve and to integrate the products of these previous projects and to perform an evaluation of various training approaches in a single experimental study.

A second and complementary goal of the research reported here was the demonstration of the deeper and more natural learning environment made possible by a case study scenario presentation. Later sections of this report describe in some detail the initial implementation of such a case study scenario on the PLATO IV system.

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[2] Spencer, G. J. and Hausser, D. L.; Blaiwes, A. S. and Weller, D. R. Use of Computer-Assisted Instruction for Interpersonal Skill Training - A Pilot Study, 1975. Technical Report: NAVTRAEQUIPCEN 73-C-0133-1.

[3] Cohen, J. L. and Fishbein, M. Development and Research Utilizing the PLATO IV System for Company Commander Behavioral Change Training. Naval Training Equipment Center, August 1975. Technical Report: NAVTRAEQUIPCEN 73-C-0129-1.

[4] Hausser, D. L., Blaiwes, A. S., Weller, D. R., and Spencer, G. J. Application of Computer-Assisted Instruction to Interpersonal Skill Training, January 1976. Technical Report: NAVTRAEQUIPCEN 74-C-0100-1.

[5] Cohen, J. L. and Fishbein, M. A Field Test of the PLATO IV System for Company Commander Behavioral Change Training, July 1976. Technical Report: NAVTRAEQUIPCEN 74-C-0095-1.

SECTION II

EXPERIMENTAL METHODOLOGY

PLATO-BASED TRAINING MATERIALS

This phase of the work had two main objectives - review and modification of PLATO human relations training materials, and an experimental evaluation of these materials.

The first task consisted of a review of existing human relations training materials implemented on the PLATO system. These materials are described in previously referenced reports (see footnotes 2-5). Results of this review were reported at length in two reports[6,7] which contain a critique of the materials and a detailed frame by frame list of suggested modifications. A summary of this review is provided in Appendix E. Recommendations resulting from this review were studied and those changes in the training materials which were considered most worthwhile and feasible were then implemented.

The resulting PLATO training materials fall into two categories. The "Orlando" materials are modified versions of those developed at the Orlando Recruit Training Command. These materials teach the CC the application of seven behavior attributes to be used in interactions with recruits: concrete, timely, clarifying, reasonable, relevant, considerate, and human. The student is taught how to use these skills in each of three behavior types: goal setting, instruction, and feedback. The presentation of this instruction uses many modes of CAI on a frame oriented basis. A pretest and posttest on these materials is also included. These materials occupy four training sessions of about two hours each.

The "San Diego" materials are modified versions of those developed at the San Diego recruit training command. These materials consist of two parts. One part is designed to give the CC an appreciation of the procedure by which he is evaluated. The other part attempts to convince the CC to perform or not perform a number of behaviors in accordance with the policies

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[6] Lukas, G. Review of Human Relations Training Materials, July 1975. NAVTRAEQUIPCEN Unpublished Report.

[7] Lukas, G. Progress Report for Phase I, Evaluation of Human Relations Training Program, June 1975. NAVTRAEQUIPCEN Unpublished Report.

of his superiors. The San Diego materials are presented in one training session of about two hours. This latter part of the San Diego materials also ascertains the CC's behavioral intentions before and after presentation of his 'superiors' policies.

A third section of the PLATO programs collects background data: age, years in Navy, and other measures discussed later. Attitudes concerning the PLATO materials are also elicited. Samples of the materials for collection of data are given in Appendices B and C.

EXPERIMENTAL ENVIRONMENT

SUBJECTS. Subjects for this evaluation were recruit company commanders (CCs) at the Recruit Training Commands (RTCs) in Orlando and San Diego. Within each RTC, subjects included both inexperienced CCs (recent CC school graduates who had never led a company) and experienced CCs (CCs who had previously led at least one company). The Orlando and San Diego CCs are considered separately because of differences in CC training and supervision and in recruit training practices between the two sites. Only male CCs participated, since the training materials were written for the male recruit training situation.

SOURCES AND METHODS OF DATA COLLECTION. The experiment used both measures collected in the course of subject interaction with the PLATO system and additional off-line data. A copy of each of these latter instruments for off-line data collection is contained in Appendix B.

Measures Collected From CCs. Background data was collected from each CC both by the PLATO system as responses to a set of multiple choice questions prior to training and also from RTC.

The following measures were collected from CCs in the process of leading their first company following experimental treatment.

Orlando Materials CC Questionnaire. This is a questionnaire to be filled out by CCs designed to determine the extent of transfer from the Orlando training materials to the actual job situation as well as to provide an outline of the training materials as a reminder to the CCs of the performance desired. The items asked the CC to rate himself on the performance of a list of behaviors and behavioral attributes which were derived from the skills taught (see Appendix B.1.1).

San Diego Materials CC Questionnaire. This is a questionnaire to be filled out by CCs which was designed to determine the extent of transfer from the San Diego training materials to the actual job situation as well as to provide an outline of the training materials as a reminder of the performance desired. The CC was asked to report whether he had performed each of the behaviors addressed in the training (see Appendix B.1.2).

CC Attitude Form. This is a questionnaire to be filled out by CCs which was designed to elicit their general attitudes toward recruit training and the PLATO training (see Appendix B.2).

PLATO Measures. Measures collected by the computer while the student was progressing through the PLATO materials are listed below.

a. Pretest/Posttest. A multiple-choice pretest and posttest was developed for the Orlando materials which yielded scores for the seven skills and the three areas. These tests were administered on PLATO (see Appendix C). The San Diego materials included pre and post measures of the student's intentions to perform the behaviors, and his understanding of the evaluation process, also implemented on PLATO.

b. Background Questions. Several questions concerning the students' background were asked during his first session on PLATO.

c. Training Measures. For each section of the Orlando materials, a score was saved indicating the number of questions which the student answered correctly on the first attempt.

Measures Collected From Companies. These measures were collected from the first company led by each CC following experimental treatment.

Recruit Questionnaire. This is a questionnaire filled out by recruits which was designed to determine the extent of transfer from both the Orlando and San Diego training programs to the actual job situation. This questionnaire is a combination of the Orlando and San Diego CC questionnaires. This questionnaire was administered twice to each company, about the second week and last week of training (see Appendix B.3).

Measures collected from Recruit Training Command records are described below.

Military Evaluation Department (MED) Scores. These scores are the result of standard recruit inspections. They have a range of 0 to 4.0 and cover the five areas of marching, barracks cleanup, locker stowage, personal appearance, and academic performance. MED inspections are administered in four consecutive weeks of training. We use the average MED score in each area for each company and the average of the averages for an overall figure of merit.

General Classification Test (GCT Score). This score is the result of a general aptitude test given to all recruits. It has a mean of 50.

Setbacks. This is the number of recruits who enter a company from another company at a later stage of training. These recruits are usually set back because of poor performance.

Dropouts. This is the number of recruits who leave a company for any reason before graduation.

TYPES OF EXPERIMENTAL DATA. The measures collected for this study fall into six basic classes: company commander background, company demographics, company commander skill performance, company commander on-the-job performance, company performance, and CC attitudes.

The source of the data is noted after each measure.

Company Commander Background.

a. Age (PLATO)
b. Education (PLATO)
c. Years in Navy (PLATO)
d. Years Experience as a Supervisor (PLATO)
e. Number of Persons Supervised (PLATO)
f. Standing in CC Training Course - inexperienced CCs only (RTC)
g. Time between PLATO training and receiving a company (RTC)
h. MED Scores of Last Company Led - experienced CCs only (RTC)
i. Rating (RTC)

Company Demographics.

a. Size (RTC)
b. Average GCT (RTC)

Company Commander Skill Performance. Measures of performance in the various areas were taken from the pretest, training, and posttest data. Definitions of the measures are included.

a. Pretest Measures - Orlando Materials (PLATO) (see Appendix C for test and scoring key)

(1) Pretest Total -- percent correct on all items
(2) Pretest GS -- percent correct on goal setting items
(3) Pretest I -- percent correct on instruction items
(4) Pretest FB -- percent correct on feedback items
(5) Pretest Concrete -- percent correct on concrete items
(6) Pretest Timely -- percent correct on timely items
(7) Pretest Clarifying -- percent correct on clarifying items
(8) Pretest Reasonable -- percent correct on reasonable items
(9) Pretest Relevant -- percent correct on relevant items
(10) Pretest Considerate -- percent correct on considerate items
(11) Pretest Human -- percent correct on human items
(12) Pretest R&P -- percent correct on reward and punishment items

b. Pretest Measures - San Diego Materials (PLATO)

(1) SD Intents -- number of behavior intentions consistent with RTC policy minus number of inconsistent behaviors

c. Training Measures - Orlando Materials; "percent correct initial" refers to proportion of items responded to correctly on first trial (there are no training measures for the San Diego materials). (PLATO)

(1) Training GS -- percent correct initial responses in goal setting materials
(2) Training I -- percent correct initial responses in instruction materials
(3) Training FB -- percent correct initial responses in feedback materials
(4) Training Concrete -- percent correct initial responses in concrete materials
(5) Training Timely -- percent correct initial responses in timely materials
(6) Training Clarifying -- percent correct initial responses in clarifying materials

(7) Training Reasonable -- percent correct initial responses in reasonable materials

(8) Training Relevant -- percent correct initial responses in relevant materials

(9) Training Considerate -- percent correct initial responses in considerate materials

(10) Training Human -- percent correct initial responses in human materials

(11) Training R&P -- percent correct initial responses in reward and punishment materials

d. Posttest Measures - Orlando Materials (PLATQ) (see Appendix C for test and scoring key)

(1) Posttest Total -- percent correct on all posttest items

(2) Posttest GS -- percent correct on goal setting items

(3) Posttest I -- percent correct on instruction items

(4) Posttest FB -- percent correct on feedback items

(5) Posttest Concrete -- percent correct on concrete items

(6) Posttest Timely -- percent correct on timely items

(7) Posttest Reasonable -- percent correct on reasonable items

(8) Posttest Relevant -- percent correct on relevant items

(9) Posttest Considerate -- percent correct on considerate items

(10) Posttest Human -- percent correct on human items

(11) Posttest R&P -- percent correct on reward and punishment items

e. Posttest Measures - San Diego Materials

(1) SD Reintents -- number of behavior intentions consistent with RTC policy minus number of behaviors inconsistent with RTC policy

On-the-Job Measures. On-the-job performance measures were obtained from both the CC himself and from recruits. Each score is derived by summing those items on the relevant questionnaire which pertain to that area. See Appendix B for questionnaire and scoring keys.

a. Orlando Materials (these measures are obtained from both the Orlando CC Questionnaire and the Recruit Questionnaire)

(1) Goal Setting
(2) Instruction
(3) Feedback
(4) Concrete
(5) Timely
(6) Clarifying
(7) Reasonable
(8) Relevant
(9) Considerate
(10) Human
(11) Reward and Punishment

b. San Diego Materials. The chief measure taken on these materials is the Behavior Score, which is the number of behaviors consistent with RTC policy minus the number of inconsistent behaviors. This measure is obtained from both the San Diego CC Questionnaire and the Recruit Questionnaire. Each behavior is also stored separately. A yes or no response consistent with RTC policy was scored 1, an answer opposite to RTC policy was scored 0, and "don't know" scored as .5. These scores were averaged across recruit questionnaires for each company.

Company Performance. The source of the data is listed after each measure.

(1) MED Barracks (RTC)
(2) MED Locker (RTC)
(3) MED Personnel (RTC)
(4) MED Infantry (RTC)
(5) MED Academic (RTC)
(6) Dropouts (RTC)
(7) Setbacks (RTC)

Morale and Attitudes. The source of the data is indicated by the item numbers of the various data collection instruments.

a. CC Attitude Form (items 1-13)

b. Recruit Questionnaire (items 4-14)

c. Recruit Questionnaire (items 4-11). This subset corresponds to the morale questions (1-8) on the CC questionnaire.

d. Recruit Questionnaire (item 4). Overall feeling about boot camp.

e. Orlando CC Questionnaire (items 1-8)

All data used in this experiment were normalized in order to facilitate use of the computer. In virtually all cases, raw data were transformed by division and sometimes addition to fall within the range (0,1). MED scores, for example, which normally range from 0 to 4 were all divided by 4. Yes/no questions were graded as 0 or 1. A complete tabulation of the scaling of data is provided in Appendix D.

EXPERIMENTAL TRAINING CONDITIONS. There were five experimental conditions defined to test the Orlando and San Diego materials separately and in combination. The training and measures which each group received are shown in Table 1.

TABLE 1. EXPERIMENTAL TREATMENT BY GROUP

	Group				
	1	2	3	4	5
a. Company Commander Background	X	X	X	X	X[1]
b. Orlando Training Materials (4 days, 2 hrs. each)					
(1) Pretest Measures	X	X		X	
(2) Training & Training Measures	X	X			
(3) Posttest Measures	X	X		X	
(4) PLATO Opinionnaire	X	X			
c. San Diego Training Materials (1 day, 2 hrs.)					
(1) Pretest Measures	X		X	X	
(2) Training	X		X		
(3) Posttest Measures	X		X	X	
d. On-the-job Measures					
(1) Orlando CC Questionnaire	X	X		X	
(2) San Diego CC Questionnaire	X		X	X	
(3) Recruit Questionnaire (2 administrations)	X	X	X	X	X
(4) CC Attitude Form	X	X	X	X	
e. Company Demographics	X	X	X	X	X
f. Company Performance Measures	X	X	X	X	X

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[1] Background measures for this group were collected from the RTC as CCs in this group did not use PLATO.

PROCEDURE

Components of the background data were used to match students in the various conditions. Variables of greatest importance are listed first.

Experienced CCs: MED scores of last company, rank, number of companies led.

Inexperienced CCs: rank, standing in CC training course, shadowing time.

All available experienced CCs were contacted to participate in the study during the interval between two companies. All available inexperienced CCs were contacted after CC school and prior to their first companies. Participants were administered the appropriate training or control treatment for their group as shown in Table 1. The various treatments were provided to CCs in accordance with the ordering in Table 1. The various data collection instruments were administered while the subjects were leading their next company following PLATO training. The CC Attitude Form and the CC Questionnaires were administered during the seventh week of each company's training period. The Recruit Questionnaire was administered to each available recruit in each company at two times, once during the second week of training and once during the ninth week. Following graduation of each company, the Organizational Measures were collected from RTC records.

Orlando Subject Status. Nearly a hundred company commanders participated in the experiment at Orlando. There was, however, considerable attrition in this initial number for several reasons. In some cases CCs were unable to complete experimental treatment because of illness or reassignment. In the other cases CCs did not pick up a company within the time allotted to collection of data or picked up "special companies" consisting of selected recruit populations which receive special treatment. Placement of recruits in such companies is usually for disciplinary or deficient performance. Since this difference in company demography would strongly bias all data subsequent to start of company training, we could not include CCs of such companies. We had originally planned to place eight CCs in each of the 10 experimental groups listed in Table 1, but because of attrition these numbers fell somewhat short. Data collection results for the Orlando phase of our experiment are summarized in Table 2.

Near the end of our data collection phase, trials were made at the Orlando RTC of a new non-competitive MED inspection system. MED inspections were still held but inter-company comparisons were not made. Otherwise, procedures were unchanged. We ascertained, using t-tests on the experimental data, as shown later, that, as expected, MED results for these "non-competitive companies" were significantly different than for the usual competitive phase, but company data was otherwise not significantly different. This means that the MEDs for 11 companies could not be used but that other data could be pooled with that of the other subjects.

TABLE 2. SUMMARY OF DATA COLLECTION - ORLANDO RTC

	Group	Inexperienced CCs	Experienced CCs
Complete Data	1	6	1
Missing RQI		0	0
Missing RQII		0	1
Missing CC Surveys		1	3
In Noncomp. Phase*		0	1
Total		7	4
Complete Data	2	5	5
Missing RQI		0	0
Missing RQII		1	0
Missing CC Surveys		0	2
In Noncomp. Phase*		2	0
Total		8	7
Complete Data	3	5	2
Missing RQI		1	1
Missing RQII		0	1
Missing CC Surveys		2	1
In Noncomp. Phase*		3	1
Total		8	8
Complete Data	4	3	2
Missing RQI		0	0
Missing RQII		0	1
Missing CC Surveys		4	1
In Noncomp. Phase*		2	0
Total		8	3
Complete Data	5	4	4
Missing RQI		0	0
Missing RQII		0	0
Missing CC Surveys		-**	-**
In Noncomp. Phase*		2	0
Total		6	4

* Companies were in non-competitive trials at RTC and MED scores were significantly changed. See text for discussion.

**Not administered.

San Diego Subject Status. The new CC at San Diego is closely supervised by CC school staff. Close monitoring of new CCs for a three week period after they pick up a first company has resulted in an attrition rate (CC relieved of his company) of about 8 percent from the 20 percent rate which existed prior to this practice. The San Diego RTC has 76 man recruit companies, with an assistant CC. Neither the company size nor the presence of assistant CC is felt by senior RTC personnel to affect performance very much; the former contention is well borne out by our Orlando findings.

At San Diego, the shadowing time assigned to a student CC is 14 days regardless of his course performance or class standing. At Orlando, shadowing time was inversely proportional to the Military Training Officer's (MTO) evaluation of a CC, and the single most effective predictor of success for inexperienced CCs. Also, at San Diego there is no MED score maintained in the skill area "barracks." Thus, there are no data for shadow time and MED barracks at San Diego.

We had considerable difficulty in obtaining inexperienced CC subjects at San Diego because in the six month window in which we could start subjects - 1 January -- 1 July 1976 - there was only one CC class graduated at the San Diego RTC. Thus, the total pool of potential inexperienced subjects was small. Of the 17 in this class, we were able to use only nine, the others picking up non-standard types of company, not picking up in time, or having been transferred. Also, morale of many subjects was low as the result of implementation problems in the present and earlier training studies performed at San Diego. The problems stemmed from the fact that program personnel were not constantly available at San Diego to deal with areas of difficulty that inevitably arise in implementing innovative training programs. Thus, both selection and retention of experienced CCs was also difficult. In all, 46 CCs completed experimental treatment and went on to lead ordinary companies. Although data was collected for each of these subjects, in many cases it was received too late to be used in the experiment. Most of this delay was from CCs picking up companies very late in the experiment. Also, access to PLATO and line problems slowed down the entry of data into PLATO, providing another source of delay. Table 3 summarizes the data that was actually entered into PLATO and which could be used by our statistical package.

TABLE 3. SUMMARY OF DATA COLLECTION, SAN DIEGO

	Group	Inexperienced CCs	Experienced CCs
Complete Data	1	0	3
Missing RQI		1	2
Missing RQII		3	3
Total		3	6
Complete Data	2	1	4
Missing RQI		2	2
Missing RQII		2	2
Total		3	6
Complete Data	3	2	2
Missing RQI		1	3
Missing RQII		1	3
Total		3	5
Complete Data	4	0	0
Missing RQI		1	1
Missing RQII		1	1
Total		1	1
Complete Data	5	-	0
Missing RQI		-	6
Missing RQII		-	6
Total		0	6

SECTION III

RESULTS

The data from this study provide information about the usefulness of the training programs for improving the ability of CCs to lead and interact with recruits. A program is considered to be of value to the extent that CCs who received the training perform better than those who did not. Thus, a primary question concerns differences among students in the various training and control conditions. Because any given training program is not expected to be equally effective for all students and under all circumstances, associated questions address the value of the training as it might be influenced by factors such as the experience and motivation of the student and specifics of the job environment in which he operates.

Another kind of question deals with relationships among the various measures obtained. These results provide auxiliary information about the value of the training. The results are presented as they apply to these questions.

RELATIONSHIPS AMONG MEASURES AT RTC ORLANDO. As a first analysis task, we investigated the relationship between the experimental measures, using Pearson product-moment correlations. The areas in which correlations were made are synopsized in Table 4. Each area is discussed in detail below. We used only Orlando data for these analyses.

CC Background Measures vs. Pretest Measures. In these tests we tried to establish a connection between both total and area by area scores on the pretests and CC background data. The attribute "reasonable" correlated at the $p<.05$ level with three different measures of experience: years in Navy ($r=.34$ $p<.05$), age ($r=.31$ $p<.05$), and number of companies led ($r=.48$ $p<.05$). The reward/punishment score correlated ($r=.39$ $p<.01$) with years experience supervising non-recruits. The lack of any significant correlation between pretest scores and either class standing (for inexperienced CCs) or MED average of last company led (experienced CCs) was very surprising and casts some doubt as to the validity of the pretest relative to the usual RTC performance measures.

CC Background vs. Pre-Posttest Difference. Here we looked at the relation between improvement in score following administration of Orlando materials. The very weak pattern of significant correlations indicates that younger, less experienced CCs are more affected by the instruction.

TABLE 4. SUMMARY OF CORRELATIONS OF EXPERIMENTAL MEASURES

	CC back-grd.	Skill Performance			On-the-Job	Co. Perf.
		pretest	Δpre/post	posttest		
CC backgrd		130 (6)	120 (7)	130 (8)	340 (34)	80 (10)
Co demographics					24 (3)	16 (2)
Posttest					72 (17)	104 (16)
Training			18 (2)			
On-the-Job					115 (57)	320 (57)
CC attitude	20 (2)		24 (1)		34 (3)	16 (2)

Unparenthesized numbers are the total number of correlations performed in the area indicated. Numbers in parentheses give the number of significant ($p<.05$) correlations.

CC Background vs. Company Performance. The CC background versus company performance yields a set of correlations useful in determining validity of group matching criteria (see section above on Procedure). We find that for experienced CCs, MED of the last company led is indeed the most important single determinant of subsequent performance - the previous MED and next MED averages correlated to the .0025 confidence level (r=.55). The major contribution to this correlation came from academic (r=.55 p<.0025) and infantry MEDs (r=.51 p<.01). The number of companies led and the CC's rating do not appear important factors in company performance.

For inexperienced CCs, class standing in CC school is a much less significant predictor of company performance than shadowing time - the latter being dependent on an informal assessment of potential performance by the MTO.

CC Background vs. Posttest. Few correlations here were significant. Years in Navy correlated negatively with concrete (r=-.30 p<.05) and feedback (r=-.32 p<.05). Years of experience supervising non-recruits also correlated negatively with these two areas (r=-.34 p<.05, r=-.37 p<.05).

Company Demographic vs. On-the-Job Measures. There was no meaningful correlation between the two measures of company demographics we collected and various subtotals of the recruit questionnaires. A slight correlation was found between GCT average and feelings about boot camp on both questionnaires (r=.22 p<.05, r=.27 p<.05).

Company Demographic vs. Company Performance. In ascertaining the effect of the CC on company training, one must take into account demographic factors. We found no significant correlations between company size and company performance but there were two extremely significant correlations between performance and GCT average. The GCT correlated negatively with the dropout rate (r=-.49 p<.001), a reasonable result, and also correlated negatively with locker MED at the .0025 level (r=.41). This latter result was rather surprising, and not understood at this time.

CC Background vs. On-the-Job Measures.

First Recruit Questionnaire Administration. As might be expected from a questionnaire administered only a few days after beginning of recruit training, there were few significant correlations between CC background and various measures of effectiveness. There were, however, four correlates with age; satisfaction with boot camp correlating positively ($r=.26$ $p<.05$), but three measures correlating negatively - "concrete" ($r=-.25$ $p<.05$), "timely" ($r=-.25$ $p<.05$), and "reward/punishment" ($r=-.40$ $p<.0025$). Reward/punishment also correlated negatively with two other measures of seniority, rating ($r=-.36$ $p<.01$) and years in Navy ($r=-.33$ $p<.05$). Years supervising non-recruits correlated negatively with "reasonable" ($r=-.24$ $p<.05$) and "timely" ($r=-.28$ $p<.05$). Thus, seniority tends to have a negative correspondence with Orlando materials behavior, especially reward/punishment.

Second Recruit Questionnaire Administration. The second administration of the recruit questionnaire shows a sharp change in perception of CC behavior relative to background measures. We now find that years in Navy correlates positively with seven measures: (RQII total $r=.27$ $p<.05$; feeling about boot camp $r=.28$ $p<.05$; San Diego total $r=.31$ $p<.05$; considerate $r=.26$ $p<.05$; human $r=.31$ $p<.05$; relevant $r=.28$ $p<.05$; and feedback $r=.27$ $p<.05$). Age now correlates positively with three measures: (considerate $r=.27$ $p<.05$; human $r=.28$ $p<.05$; and feedback $r=.28$ $p<.05$). Years experience supervising non-recruits has five positive correlates: (RQII total $r=.26$ $p<.05$; San Diego materials total $r=.28$ $p<.05$; reasonable $r=.24$ $p<.05$; relevant $r=.30$ $p<.05$; and goal setting $r=.25$ $p<.05$). Measures of seniority now correlate positively with fifteen measures and negatively with none.

Intended Behaviors vs. On-the-Job Measures. Here we compare the intended behaviors of CCs both with respect to Orlando materials, by behavior and attribute and with respect to the 24 behaviors of the San Diego materials, with the behaviors of the CC as perceived by his recruits on both recruit questionnaires. Overall there is a weak correlation between CC posttest performance and perceived behavior relative to Orlando material but there is a strong correlation between CC posttest performance and recruit observation of feedback behavior ($r=.49$ $p<.0025$).

The San Diego materials provide some significant results for individual behaviors. The strongest correlation was for question 15 "Did your CC attend most instructor conducted classes?" ($r=.69$ $p<.001$ on RQI, $r=.80$ $p<.001$ on RQII). A significant result also appears on RQII for question 22 "Did your CC try to hide a recruit who might cost the company points?" ($r=.41$ $p<.01$). This question is not really meaningful in RQI since the first administration precedes the MED inspection period. Question 10, "Did your CC allow RPOs to give physical training (such as pushups) as a form of discipline?", correlated positively for RQI (r=.44 p<.01) and then negatively for RQII (r=-.46 p<.01). Apparently the CC's first good intentions and behavior are modified by subsequent experience.

One might expect the correlation between posttest and on-the-job measures to weaken as time passed after the posttest and as a result of continued exposure to the company. Our results do not bear this out, the second recruit questionnaire correlates with the posttest in almost exactly the same measures as did the first.

Company Performance vs. Posttest. The CC who had done well on the posttest administered to groups 1, 2, and 4 tended to be significantly superior in several respects. Most notably the dropouts correlated very significantly with the posttest total (r=-.46 p<.01) and with several posttest measures (dropouts vs. feedback r=-.46 p<.01; dropouts vs. instruction r=-.46 p<.01; dropouts vs. reward/punishment r=-.47 p<.01; dropouts vs. considerate r=-.38 p<.05; dropouts vs. concrete r=-.37 p<.05). Slightly positive results were also found for MED scores. Thus, posttest score is an excellent predictor of attrition but much less so of MEDs. This suggests that attrition can be reduced at RTCs by improving CCs' knowledge of the behaviors and attributes in the Orlando program. No meaningful correlation was found between San Diego re-intents and company performance.

CC Background vs. CC Attitude. Two measures of attitude were used, a score on the CC attitude form aggregating feelings about his job and RTC generally and a score corresponding to his feelings about PLATO. No pattern of correlations emerged from these components. Weak negative correlations emerged between general RTC morale responses and years of supervising non-recruits (r=-.32 p<.05), and between shadowing time and approval of PLATO training material (r=-.36 p<.05).

On-the-Job Measures vs. Company Performance. An important determination with respect to recruit questionnaires is whether they measure only subjective variables, or whether responses relate to real on-the-job performance measures. We expected the second administration of the recruit questionnaire to be more effective in that determination and performed a very detailed analysis using RQII. We found that the measures derived from the Orlando materials yielded a consistent pattern of extremely strong correlation with company performance in MED inspections and a much less strong negative correlation with setbacks and dropouts. Taking MED totals, for example, we find strong correlations with concrete (r=.40 p<.0025), clear (r=.35 p<.01), timely (r=.40 p<.0025), and weaker correlations with reasonable

($r=.28$ $p<.05$), goal setting ($r=.31$ $p<.05$), and instruction ($r=.31$ $p<.05$). When these significant behaviors are correlated with individual company performance areas we see that the major contribution to significance of "MED totals" correlations comes from the areas academic (six positive correlations) and barracks (eight positive correlations), much less from personnel (three positive correlations) and even less from infantry (one positive and one negative) and locker (three negative correlations). The attributes which contributed to the very strong positive correlation pattern all related to qualities of teaching -- timely, concrete, clarifying, relevant, and reasonable.

Total MED score strongly correlated with the morale ($r=.41$ $p<.0025$) and morale subset ($r=.51$ $p<.001$) sections of RQII. Chief contributions to these correlations also came from the skill areas barracks and academic as above, but also in this case from infantry. Dropout rate correlated negatively with feelings about boot camp ($r=-.38$ $p<.01$).

The San Diego-based questions gave a much weaker pattern of correlations. The total correlated weakly negative with setbacks ($r=-.26$ p $.05$). Individual items yielded many more negative results (eight vs. three) than positive ones in MED skill areas and were not very conclusive in setbacks and dropouts (one positive, three negative). Thus, the San Diego-based measures are poor if not negative determinants of company performance. It appears that CCs who behave in opposition to RTC policy achieve higher scores in areas which constitute a significant aspect of their evaluation. In the interest of credibility of the RTC (if for no other reason) it would be desirable to provide a greater degree of compatibility between how CCs are told to act and what goals they are told to achieve. This can be done by changing either the policy or the evaluation criteria for CCs.

CC Attitudes. CC attitudes as expressed on the CC Attitude Form were again grouped into two categories - those relating to feelings about the job and RTC generally (RTC morale) and those relating to feelings about PLATO training (PLATO morale). These two measures were correlated with a wide range of other measures.

CC Attitude vs. ΔPre/Posttest. No pattern of significant correlation emerges here.

CC Attitude vs. On-the-Job Measures. No pattern of significant correlation emerges here.

CC Attitude vs. Company Performance. A positive correlation between MED total and RTC morale ($r=.26$ $p<.05$) was contributed to by the skill area locker ($r=.26$ $p<.05$).

CC Surveys vs. On-the-Job Measures. Here we compare the CC's stated behaviors on the CC survey with his behaviors as perceived by his recruits on the two administrations of the recruit questionnaire. These surveys were collected at the end of training so one would expect them to correlate more highly with RQII measures. This was not the case. In fact, the RQI total correlated much better with the survey total ($r=.52$ $p<.01$) than did the RQII total ($r=-.15$, p not significant). Of the Orlando behaviors on the survey six correlated significantly with RQI measures and with none at all in RQII.

The situation for San Diego behaviors was more the expected one, CC survey vs. RQI giving three positive behaviors and one negative, survey vs. RQII giving eight positive results. Strong correlations were found with RQII questions:

Did your CC
"give out demerits as a form of punishment" ($r=.54$ $p<.0025$)
"tell the recruits that he didn't believe in setting back recruits" ($r=.62$ $p<.0025$)
"attend most instructor conducted classes" ($r=.66$ $p<.0025$)
"learn the last name of every recruit" ($r=.58$ $p<.0025$)

Consistency Measures. We attempted to determine the stability of experimental data by comparing measures that we felt should be very close, if not identical.

One such source of measures is the PLATO results for group 4 subjects who were administered the Orlando materials pretest and posttest and the San Diego materials intents and reintents with no training intervening. The pretest/posttest correlated very highly for this group ($r=.82$ $p<.001$) but the correlation between intents and reintents was surprisingly low ($r=.56$ $p<.05$), the latter indicating some randomness in responses.

The second natural area for consistency measures is comparing RQI with RQII responses. We would expect some change from the administration of RQI in the second week of training to the administration of RQII in the last week, but an essential similarity between the two is natural. In fact, the RQ totals correlated to the .001 level ($r=.46$) and 37 out of 40 of the individual measures correlated significantly, 25 of these to the .001 level.

Training Measures vs. ΔPre/Posttest. We looked for correlations between subject performance within the PLATO training materials and his improvement in test scores. Two measures of performance were used - percentage of questions answered correctly on first trial and latency time. No significant correlations were found for the first of these and only weak correlations for the latter.

DIFFERENCES BETWEEN COMPETITIVE AND NONCOMPETITIVE PHASE COMPANIES AT THE ORLANDO RTC. We made several t-tests between competitive and noncompetitive company results, summarized in Table 5. These indicate that MED data from the noncompetitive companies should certainly not be used but that other on-the-job and performance measures seem consistent. These results are reasonable consequences of the change in training environment.

TABLE 5. T-TEST BETWEEN COMPETITIVE AND NONCOMPETITIVE PHASE COMPANIES AT ORLANDO

Measure	N_1	M_1	S_1	N_2	M_2	S_2	df	t
Recruit question. I total	52	.682	.047	10	.701	.036	60	1.365
Recruit question. II total	50	.705	.046	8	.720	.061	56	.593
MED average*	53	.902	.022	11	.834	.027	62	-7.542**
Morale total RQI	52	.647	.048	10	.659	.026	60	1.098
Morale total RQII	50	.699	.051	8	.730	.059	56	1.294

Group 1 = Competitive
Group 2 = Noncompetitive

* A few MEDs were not given for companies in the noncompetitive phase in the skill area barracks, but were rated as "sat" or "unsat". For purposes of analyses, we assigned the relatively high values of 3.6 (for unsat) and 3.8 (for sat) to these ratings. In spite of these high nominal values, the resulting MEDs were still extremely low.

** $p<.0025$

DIFFERENCES AMONG TRAINING CONDITIONS AT RTC ORLANDO. These analyses examine differences among experimental groups. Differences among groups that can be attributed to the training and those that might be influenced by other factors are considered.

Comparability of Students. Ideally, students in the various experimental conditions should have similar opportunities for success prior to training. Then, differences in performance that are noticed after training can be attributed to the training and not to biases in the assignment of students to groups. Three kinds of evidence can be used to assess the initial comparability of groups: background characteristics of CCs, demographic characteristics of companies, and pretest scores. Results are discussed below. Tabulations of ANOVA (Analysis of Variance) and t-test analyses are presented in Appendix A.

Company Commander Backgrounds. Table 6 presents results from ANOVA tests on the background measures: age of CC for both inexperienced and experienced groups, shadowing time for new CCs, and MED average for last company led of experienced CCs. Our previous analyses had determined that they were the strongest correlates of subsequent CC behavior and company performance. No significant differences in mean were found here.

The demographic comparability of companies led by the CCs in different experimental groups is presented in Table 7. Again we find no significant differences between groups.

Pretest results are displayed in Table 8. Only Groups 1, 2, 4 received Orlando materials pretest, and only Groups 1, 3, 4 the "intents" part of the San Diego materials. Here also no significant differences were found. Thus we find no significant differences among the experimental groups prior to training in this experiment.

Treatment Effects. Having established the degree of similarity among experimental groups prior to training, the extent that these groups differ after training needs to be determined. Differences noted among groups after training that cannot be attributed to differences obtained before training can be ascribed to the experimental conditions. To see if CCs learned in the training situation, pretest and posttest scores are compared. To determine the extent to which the effects of the instruction went beyond the training situation and actually were manifested where they count - in the job situation - CCs On-the-Job Performance Measures and their Morale and Attitude Measures are appraised. Finally, to see if and how differences in CCs' performances affected the recruits, Company Performance Measures are evaluated.

Pretest/Posttest Differences: This comparison assesses the extent to which characteristics of the various groups changed during the training period. We performed ANOVAs not only on change in total score but also performed an analysis by behavior and by attribute as well as for the separate area "reward/punishment." Results are summarized in Table 9. Significant differences in mean were found for pre/posttest difference, in total score, in attributes, and in behaviors. The t-tests to follow up these significant results are summarized in Table 10. We find very significant ($p<.0025$) improvement in Groups 1 and 2 compared to Group 4 for inexperienced CCs, and somewhat less significant ($p<.01$ Group 1 vs. 4, $p<.05$ Group 2 vs. 4) results for experienced CCs. We also found a significant difference between behaviors for experienced CCs, which the t-tests show to be a significantly greater occurrence ($p<.05$) of goal setting over both feedback and instruction, the latter two of which do not significantly differ. The main benefit of the Orlando-based materials seems, thus, to be attributable to improvement in goal setting performance.

On-the-Job Measures. Table 11 presents the Analysis of Variance summary for measures derived from the first administration of the recruit questionnaire (RQI). Analysis was performed by total score, Orlando materials total, attributes, behaviors, reward/punishment, San Diego total, and morale responses. Significant F-ratios were found between attribute means and between behavior means, both for experienced and inexperienced subjects (all at the $p<.005$ level). No group differences were found.

Table 12 gives the results of t-tests corresponding to these four significant F-ratios. We find for behaviors that recruits report goal setting occurring more frequently ($p<.0025$) than feedback and instruction, and instruction as more frequent than feedback ($p<.0025$). The attributes tend to group themselves into clarifying, concrete, reasonable, relevant, timely and considerate, human, the latter two being considerably lower than the first five.

Table 13 presents the Analysis of Variance summary for the second administration of the recruit questionnaire, exactly paralleling Table 11. Again we have a very significant ($p<.005$) F-ratio for differences in behavior means and also in attribute means, both for experienced and inexperienced CCs. We also have a significant difference in group means for experienced CCs, Orlando-based material behaviors. We followed up each of these five significant findings with t-tests, as shown in Table 14. We find no meaningful patterns of differences in group mean. Behaviors are each significantly ($p<.005$) different - the same as for RQI. Attributes again tend to sort out into the two groups: clarifying, concrete, reasonable, relevant, timely; and considerate, human.

An alternative to aggregating recruit responses by company prior to aggregation for t-tests is to score by recruit, taking recruits as individuals within each experimental group. We scored morale and Orlando materials questions on the recruit questionnaires for Group 2 vs. Groups 4 and 5 combined for evaluation of Orlando materials training effectiveness and morale, and San Diego materials sections for Group 3 vs. Groups 4 and 5 combined for a measurement of San Diego materials training effectiveness. We calculated separate results for recruits led by inexperienced and by experienced CCs. Thus, there were four groups in all. We separated the questionnaire into three sections: q. 3-14 being morale, q. 15-39 bearing on the San Diego materials, and q. 40-94 bearing on Orlando materials. We totaled the responses for each question in each of these sections in which the experimental group mean was better than the control group mean. (Scoring of the recruit questionnaire is given in Appendix B. Note that on some questions a positive score corresponds to the behavior sought and on the rest a negative response is better.) We then performed the sign test on these totals and on the totals for significant responses (on the t-test) only. These results are all presented in Table 16.

We find that the San Diego materials have no significant effect on recruits morale responses, neither for experienced nor inexperienced CCs. They also have little effect on the reporting of San Diego behaviors, as given by questions 15-39. The Orlando materials yield a significant improvement in morale responses for recruits of inexperienced CCs (11 of 12* questions $p<.0125$) but not for recruits of experienced CCs (7 of 12*, not significant). Thus, inexperienced CCs appear to have benefitted more from the training in this respect.

An even stronger result is shown for the questions 40-94 reporting the behaviors taught by the Orlando materials. For inexperienced CCs, we find 48 of 55* instances in which the experimental group outperformed the control group (sign test $p<.0025$) and for questions with significant t in 42 of 44* cases the Group 2 CCs outperformed the control group (4 and 5). Furthermore, the t-test gave extremely strong results, 29 of the t-tests yielding $p<.0025$. (In fact, for both of the cases in which control group outperformed Group 2, questions 55 and 72, we had p<.05, a weaker result.) Nearly as strong a pattern was derived for experienced Group 2 vs. Groups 4 and 5 CCs. Behaviors which favored the experimental group, 2, were 45 of 55 and for those with significant t's only, 28 of 29 (for both p<.0025 for the sign test). Thus, we see again that inexperienced CCs benefit more from this training; although experienced CCs also showed great improvement.

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* Note that to determine relative performance of test and control groups, the scoring keys in Appendix B must be used to determine whether questions have positive or negative scoring.

Company Performance: There are two major types of performance measurements. Table 15 shows the difference in dropout rates between the various experimental groups and MED score differences, both averages and by skill area. We find a significant difference between MED means for the various skill areas. This is attributable to the different procedures used to score each of these areas.

Assessing Experimental Treatment According to CC Motivation: A useful decomposition of experimental groups can be made on the basis of motivation. If a CC is not motivated, there is little chance of any form of training affecting his behavior. This is not to say that unmotivated CCs perform less well than do motivated ones, in fact, our earlier correlation analysis shows no such difference. It is rather that attitude to a job affects interest in self-improvement. We, therefore, found the median score on the CC opinion form for the two measures, attitude to RTC and attitude to PLATO training, and separated CCs according to their position relative to the median in each. We then performed t-tests for post-company performance measures and RQII measures to look for differences due to experimental treatment. Results are given in Table 17. We were able to do this for inexperienced CCs only as there were too few experienced CCs who had handed in opinion forms and our sample size was, therefore, inadequate. Also, Group 5 CCs received no opinion form, so Group 4 was the only real control group. To try to differentially assess value of Orlando and of San Diego materials, we used Group 3 as part of the control group for the former and Group 2 as part of the control group for the latter. Furthermore, these inclusions helped balance the inclusion of Group 1 subjects in the experimental treatment group for the purposes of this differential evaluation. Significant results were found for the "motivated" group as shown in part A of Table 17. We see that Groups 1, 2, and 3 combined performed significantly better in postcompany MEDs than Group 4 and that this difference was borne across to superior MEDs for Group 1,2 vs. Group 3,4 which shows that the difference is largely due to Orlando training materials. Groups 1,3 had significantly fewer dropouts than did 2,4, a difference attributable to San Diego training materials.

DIFFERENCES AMONG TRAINING CONDITIONS AT RTC, SAN DIEGO. A relatively limited number of evaluations could be performed using San Diego CCs because of the data entry difficulties described above. Thus, only preliminary results are reported in Tables 18-20.

We first investigated the effects of experimental treatment on company performance measures of experienced CCs, the MED average and dropout rates. (We had no PLATO measures for Group 4.) The ANOVAs for these, as shown in Table 18 A,B, were not significant but large enough to indicate further investigation. This was done in a series of t-tests as reported in Table 18 C. To increase sensitivity of the t-test, we first lumped together all the experimental treatments - Groups 1,2,3 - and compared them with Group 5. The dropout rate showed a small value of t, so it was not pursued further, but the MED average showed a substantial difference in mean, leading to a t significant at the .05 level. We followed this up by using breakdowns by group and by skill area. We found that the major contribution to the significant t was from Groups 1 and 2 and to a non-significant degree from 2 separately, indicating that the improved MED average was the result of the Orlando materials. When broken down by skill area, we found the major contribution by far was from the personnel MEDs ($p<.001$) and locker ($p<.001$). Academic MEDs gave a negative contribution ($p<.001$).

We also used t-tests to compare the background measures, GCT and previous company MED, the latter having been found to be most predictive of future performance for experienced CCs. No significant differences between Groups 1,2,3 and 5 were found, in fact, the Group 5 mean was slightly higher for both of these measures.

Table 19 provides an ANOVA summary for group differences in recruit questionnaire responses for Groups 1,2,3 - the only groups for whom data had been entered into the computer. The F-ratios derived from these measures indicated that further investigation would not be useful.

In Table 20 we display the item-by-item results of comparing RQII responses by recruit for Groups 2 and 3, the only ones with adequate size for these tests. Neither the t-test nor the sign test gave results of any significance. The only result of any interest was that Group 2's recruits outperformed those of Group 3 in 17 out of 24 measures related to the San Diego materials -- a result which is very near the $p<.05$ level for the sign test.

SECTION IV

DISCUSSION

In this section we give the major implications of the very large number of specific results reported in the previous sections and in the appendices and a general discussion of the research effort.

A first consideration in evaluating instructional materials is whether the immediate objectives in the instructional materials correspond to useful working skills. A useful way to determine the relevance of the skills taught is by correlating level of skill in each of the behaviors taught by the materials with various external measures. The level of skill is most easily measured by the posttest following the instruction. We found that the Orlando CBI materials posttest had a very strong correlation with external measures, both in the recruits' perception of CC behavior and in company performance. By far the most important correlation was between posttest and recruit retention rate. The San Diego CBI materials posttest gave a less strong pattern of correlations.

An additional index of the value of the training objectives is derived from correlations between the on-the-job behaviors of CCs and the performances of their companies, independent of whether the behaviors of the CCs were acquired through the CBI or by other means. These analyses indicate that recruits performed better on traditional RTC measures (MEDs and dropouts) when the CC performed more of the behaviors taught in the Orlando based CBI. Military Evaluation Department's (MEDs) scores and dropouts also were better for companies with better morale (and morale was improved as a result of the CBI).

The situation for the San Diego based CBI, however, is not as favorable. Here, greater performance of the behaviors being taught is associated with lower MED scores. Thus, it appears that CCs feel they have to disregard many of the San Diego behaviors which represent RTC policy in order to succeed. Further, intuitively it appears that the RTC behavioral policy is sound but that the measures of CC success require behaviors inconsistent with those of the RTC policy.

Having determined the usefulness of the behaviors being taught, one must next determine whether they are taught effectively. Comparison of control group improvements in knowledge of the behaviors with those of experimental groups receiving CBI shows clearly that the desired behaviors are being taught.

Finally, we have the direct evaluation of the effects of the instruction by comparing performance of control and experimental groups after having completed instruction. In performing comparisons between CCs in terms of company averages, we found that group size was insufficient to clearly demonstrate differences, although differences were indicated. But when we looked at recruits of the CC's companies individually, we saw an extremely strong pattern. Recruits of CCs who had received Orlando CBI were clearly differentiated from those in the control group both in their perception of CC's Orlando training based behaviors and in general morale responses. This effect, though very strong for both experienced and inexperienced CCs, was much stronger for the latter group. The San Diego CBI had much less effect on the CC as perceived by his recruits, both in morale and in specific behaviors taught by the CBI.

There is some evidence that the CBI was responsible for improvement in the competitive scores and dropout rates of recruits. These findings were obtained when the more highly motivated students at Orlando were compared with one another. The improvements in MED scores noted at Orlando as a result of the training were confirmed by the data from the San Diego located evaluation where these scores were higher for the companies of the students independent of their motivation level. This suggests that the CBI is sufficiently powerful to effect the kinds of organizational goals which are considered to be under the influence of a host of other variables.

We feel that further experiments with larger CC populations would extend our partial results into a broader implication of utility. The effectiveness of these materials seems to be in the areas of CC performance, recruit morale and performance, and retention within the companies led by CCs trained with this CBI. It is, therefore, of some interest to ask whether these attributes are further retained once the recruits graduate and a longitudinal study would be most useful.

No formal analysis was made of the PLATO system hardware and software, either in their instructional or cost effectiveness, but several informal observations about the former might be of interest. The use of graphics enabled by the PLATO terminal was quite useful in creating and maintaining student interest. Even without graphics, the presentation of material on a screen, with selective erasing and writing at any position on it, made delivery of instruction much more efficient than on a typewriter-like terminal. The touch-panel option, permitting the computer to determine position of user touches on the screen, was also extremely effective. A user could touch the text corresponding to his choice of action or of response. We were less pleased with the unique authoring capabilities on the system - the TUTOR language. Although they are quite effective for implementation of simple graphics displays and of simple frame-oriented CBI sequences, they were difficult to use in creating large complex programs such as our case-study scenario. We would have much preferred using a standard time-shared system for program development, using an ordinary text editing language, like TECO, and a general purpose programming language such as FORTRAN.

SECTION V

THE CASE STUDY SCENARIO

INTRODUCTION AND RATIONALE

We have developed a case study scenario on PLATO to provide some experience in interpersonal interactions against a background of scheduling normal day-to-day activities. For pedagogic effectiveness we substantially compress the normal duration of the CC's activities and the effect is a very schematic simulation but one whose every part is identifiable with the real scheduling and recruit interactions a CC must deal with. We feel that our simulation is a useful augmentation of the existing human relations materials in several respects. First, it embeds CC/recruit interactions within an operational environment. Thus, the CC must himself decide courses of action to be pursued; a far more active role than simply responding to specific questions as is the case with traditional CAI. Also, the extensive operational environment's many options force a CC to economize, to perform only those actions and to elicit only that information relevant to successful execution of his role. Also, the involvement of the CC student with a single case study for a relatively extended period of time permits development of the simulated recruits as in-depth personalities, each with consistent, identifiable character traits. We can characterize these differences between classical, frame-oriented CAI and our case study based methodology in two broad areas. First, in the case study the user must seek out and elicit information from the system. His knowledge about the situation within which he is to make a decision depends on his own initiative and relevance of inquiry. In frame-oriented CAI the information required to make a correct response is simply presented to the user. Second, the case study provides the user a closed loop environment. The implications of his decisions are presented, not as a simple judgment, but rather in the further unfolding of the case study scenario. Thus, the case study user must learn to evaluate his own actions. This case study methodology does not provide the frequent, immediate, analytical feedback of traditional CAI. However, these features were omitted in order to obtain the training benefits of the simulation qualities of this approach. In the real world, the CCs only feedback is in the responses of his recruits, verbal and otherwise, and their performance. Thus, limiting pedagogic intervention and feedback during the scenario encourages the CC student to develop needed introspective and observational skills.

The training objectives of the case study scenario cannot be easily separated into specific elements of factual knowledge as is the case with frame-oriented CAI materials. This is due to the extended nature of the information gathering and feedback gathering behaviors being taught. Thus, we feel that the objectives are better characterized by operational behaviors as measured on the job across a period of time. Specific behaviors taught by the materials described below include better choice of petty officers, as measured by RTC choice criteria, improved conflict resolution with impact on recruit morale scores and on the dropout rate. Our case study based CAI should contribute to a better management of recruit scheduling which will show up in MED scores, and to that part of the dropout rate generated by poor recruit performance.

GENERAL DESCRIPTION OF THE CASE STUDY SCENARIO

Scheduling of recruit activities forms an important part of a CC's duties. He must balance his company's needs for instruction and practice in each of those five skill areas which are the objects of MED inspections: locker, barracks, personnel, academic, and infantry. The CC must monitor the progress of each recruit and most particularly the effectiveness of his choice of RCPO who must administer much of the practice.

This scheduling aspect of the case study lessons serves as a backdrop to specific crises and incidents which require specific mediation by the CC. The student is given a company of seven recruits (the reduced number being required for meaningful interactions within a reasonable time span) for five days beginning at 3-1 day. His first task is to choose an RCPO.

The CC can interview each of his recruits, asking them any or all of the following:

Why did you join the Navy?
Please describe previous military experience.
Describe your occupation prior to enlistment.
Do you have any sort of police record?
Thank you. (conclude interview)

The student also has access to each of the recruit's hard cards which are in standard format and contain all information standardly found on hard cards. He can follow up the entries with further questioning derived from the above set of queries. At any point in the interaction, the CC trainee can choose one recruit for RCPO upon which the computer will provide a critique both of his choice and of the amount of questioning leading to that choice.

The RCPO having been chosen, the CC now is to lead his company through five days of activities, 3-1 day through 3-5 day. The computer display includes a complete schedule for all recruits, across the 10 time periods of the day, as well as appropriate control layouts designed for use with a touch panel. At any time, he can schedule activities, look at inspection scores to date or look at individual hard cards.

Scheduling possibilities include instruction and practice in each of the five skill areas as well as informal CC inspections. Some time slots are filled with preassigned activities such as MED inspections, chow, and classes. When the CC trainee is satisfied with his choices, he can advance the "clock," hour by hour through the day. At the end of each hour a report is provided describing what each recruit has done. The CC's workload for that hour is also discussed. If a formal MED inspection has been scheduled, the results are reported (and placed on each recruit's hard card). The driving mechanism underlying these effects is a set of vectors of recruit descriptor constants, one vector per recruit. The elements of the vector are the amount of instruction and practice required to achieve proficiency in each of the five skill areas, the efficacy of CC vs. RCPO led practice and instruction, a "leadership" coefficient which defines his ability to instruct and several minor variables. These vectors are updated on the basis of scheduled assignments. To do well, the CC must make a good choice (initial or otherwise) of RCPO and balance his scheduling well. Also, resolution of the crises which arise at 3-1 and 3-4 days, discussed next, will strongly affect company performance.

Case Study Dialogues. The steady work of scheduling and monitoring the progress of the trainee's company is punctuated by two crises which arise on 3-1 and 3-4 days. The specific nature of the conflict depends entirely on the choice of RCPO, each of whom has a distinct and well-defined personality. Thus, there are 14 separate dialogues. One recruit is too lax and easygoing, for example, and if he is RCPO, some recruits take advantage of him. Another recruit is too authoritarian, his virulent anticommunism and prejudice against college education also create leadership problems. The CC trainee, just as in his choice of RCPO, has several investigative possibilities. He may speak with a single recruit or with the entire company. He can reprimand either the RCPO or a recruit. He can replace the RCPO. The course of the CC's investigation will depend on whom he speaks with and when. The RCPO's original story may change, for example, once the CC has spoken with the rest of the company. Also, the CC's conduct of the investigation may be questioned, for example when he performs some action without having probed into the situation adequately.

Integration of Case Study Scenario Components. Careful integration of the dialogues with the scheduling package is essential for obtaining a meaningful case-study scenario. The four actions open to the CC for resolution of the difficulty each must have an appropriate impact on subsequent company behavior. These actions are reprimanding the RCPO, reprimanding the plaintiff recruit, replacing the RCPO, or doing nothing -- leaving the situation unchanged. In addition, the CC's handling of the case, in particular the amount of his questioning, is monitored. Behavior changes can include changes in the leadership effectiveness coefficient of the RCPO and in recruit proficiency and learning vectors as appropriate. The influence of the student's responses on future events of the program is also exemplified by the choice of **replacement** RCPO where the impact of this choice depends upon past events in the program.

A SAMPLE RUN THROUGH THE CASE STUDY SCENARIO

The following set of frames illustrates the case study materials in actual use. The -PRESS NEXT- instruction is not visible in most of those frames which have it at the bottom of screen. This cropping was needed so that the reproduction of the screen was large enough to be legible. Frames 1, 2, and 3 are introduction leading to the first CC task - choosing the RCPO. Frame 4 displays the recruit roster and frame 5 shows the first frame of the subsequent interview with Recruit Able. The lower half of the screen presents the six touch button options that the CC has during interviewing. The CC, in frame 6, has asked for

Able's hard card, a reasonable first step, and frame 7 shows a further question of the interview. Frames 8, 9, and 10 show part of the interview of Baker. In frame 11, the CC, having interviewed the remaining recruits, chooses Able as RCPO and his choice is critiqued. The CC then proceeds to running the company.

Frames 12 to 19 provide instruction in use of the available options, and at frame 20 the CC is ready to begin. He chooses to look at MED inspection scores first, in frame 21, and then proceeds to start scheduling activities, as shown in frame 22. In frame 23 he has completed scheduling day 3-1 and returned to top level and begins going through the day's activities. Feedback is provided after each hour as in frame 24. The scheduling and execution of activities proceeds for subsequent days as in frames 25, 26, 27, with the interpolation of two incidents in the course of the week of training. In the first, starting in frame 28, Able is having difficulty with Goober. The options open to the CC are shown as touch-buttons at the bottom of the screen. In frames 29, 30, and 31, the user is shown interrogating first the RCPO and then the rest of the company. The complete lack of corroboration leads the user to reprimanding Goober and he proceeds back to everyday matters. A second incident two days later is shown in frame 34. In this case, he is having difficulty with Fish. The user, after subsequent investigation, again chooses to retain Able as RCPO. The final part of the week's schedule is MED inspections, two of which are shown in frames 35 and 36. By keeping track of company performance with mock inspections and balancing training, good MED scores have been achieved. A further postmortem frame discusses treatment of the RCPO. In particular, the user in this sequence, although performing reasonably well in initial choice of RCPO, and in the first incident, certainly should have replaced the RCPO after the second incident in which the sketchy evidence from the first was strongly corroborated. Further postmortem frames discuss the MEDs which, in this case, were quite respectable.

FURTHER DEVELOPMENT OF CASE STUDY MATERIALS

A number of changes and improvements have been suggested in the course of preliminary use of the materials. These relate in most cases to improvement and expansion of the feedback that the user gets as he proceeds through the case study. Extensions of interest are described for two major aspects of the case study: RCPO selection, and CC treatment of crisis situations.

RCPO SELECTION. Following the CC's initial choice of an RCPO, additional discussion should be incorporated to assess the reasonableness of his decision. This interaction will treat the adequacy of his inquiry both regarding the number of candidates considered and the depth of inquiry made. Seven recruits are available as RCPO candidates. Each of these has possible shortcomings as an RCPO, and some have very serious drawbacks. For example, one has a police record and is a liar, and another is a political ideologue with violent tendencies. The CC should interview at least three "reasonable" candidates initially, i.e, recruits with leadership potential and with no evident problems or deficiencies showing up in their hard card data.

The CC's decision will be assessed by the program in the light of the data he obtained. Omissions of important data will be noted, e.g., failure to question a recruit about an arrest or conviction as indicated on his hard card. We would like to detect instances where the CC's decision is made in a thoughtless mechanical fashion, e.g., by asking all the questions instead of selectively questioning on important items. Incorporation of a number of additional irrelevant question items should help in this determination, e.g., questions such as "Do you have any hobbies?", and "What political party do you favor?".

Following the CC selection and the program critique of his decision, a two-way discussion with the CC concerning his decision will replace the present summary statement. The object will be to find whether the CC has well thought out grounds for his choice, including an awareness of its good and bad aspects. The discussion will treat the thoroughness of the CC's inquiry, and his interpretation of hard card and interview data, especially those data that might argue against his decision. Apparent lack of awareness or concern about these issues will be noted for subsequent discussions concerning RCPO replacement decisions.

The discussion following the RCPO choice will concentrate on the CC's knowledge and evaluation of (1) the negative characteristics of his chosen RCPO, and (2) the positive characteristics of the candidates he rejected. For example, if he had chosen Clement on the basis of previous occupation - police force - and had failed to ask Clement to describe his occupation during the interview, he would not have found that Clement was a police trainee rather than a policeman and that he was forced to resign because "somebody had it in for me and got me in trouble." Further, if he had failed to query Clement concerning his reason for joining the Navy, he would not have detected possible feelings of insecurity or inferiority on Clement's part. If, however, he had obtained these interview data and had chosen Clement in spite of them, a comment will be made questioning the soundness of his judgment. A good cautionary message might be "In my opinion Clement exhibited considerable insecurity in his responses. He even shifted his previous answers (in the hard card record) for previous military experience and duration from eagle scout and 4 years to practically an eagle scout and 3 years! If you insist on going along with him you'd better keep a good watch on him!"

Also, if the CC had considered Dobbs and had rejected him on the basis of a previous arrest without checking on the circumstances, he would have failed to determine that "The offense was minor and perhaps even unfairly charged and, moreover, it came about as a result of Dobbs' strong interest in sailing. Further all his other responses and the supporting data suggest a very strong candidate with good naval background, interests, and leadership potential!" An even stronger comment would be made if these data had been obtained and, nevertheless, Dobbs had been rejected in favor of Clement.

No matter who is chosen, negative considerations will be brought forward for the CC to counter. If he had investigated these potentially unfavorable aspects, he will have a chance to defend his choice. For example, if he chooses Dobbs and knows about Dobbs' arrest (for use of improper towing gear while towing his sailboat onto a semi-private beach), he will be told: "That indicates that Dobbs may have significant problems - lack of respect for the law and for peoples' privacy. What do you think?" The CC may respond from a long menu of stock answers, with "The arrest item was not important in this instance" which is an acceptable response. When offered the option to change his mind, he will not be challenged if he keeps Dobbs as his RCPO choice.

The case study has been designed so that, irrespective of the initial choice of RCPO, two crisis situations will develop which put that choice into question. In dealing with these situations, the CC has a number of options available to him including the possibility of reprimanding or of replacing the RCPO. The second crisis always implicates the RCPO more seriously than the first. Replacement of the four more reasonable candidates (Able, Baker, Dobbs, and Eager) is not clearly warranted by the initial crisis incident but is a reasonable action even for these choices after the second crisis. The other three recruits (Clement, Fish, and Goober) should probably be removed as RCPO after the initial crisis, and certainly after the second one. Thus, at least one more round of selection of a new RCPO is made probable.

At present, the CC interactions involved in selecting a new RCPO are essentially identical to those used in the initial choice of RCPO. The new selection process could be extended to include a critique of the previous selection. The criteria used in making the previous choice will then be explicitly identified. These will be indicated by the CC from a standard list of items including previous leadership, military experience, high educational level, above average military test scores, etc. The RCPO choice will be ranked as high, average, or low on all these items. The CC will then be asked to identify his reasons for dismissing the RCPO - again from a standard list with choice items specifically tailored to the recruit involved and the incident in question. He will then proceed to choose a new RCPO on the basis of hard card data and interviews as before. This process will be repeated subsequently if the CC makes additional RCPO replacements.

CRISIS SITUATIONS. The two crisis situations are introduced in a vivid, explicit, obvious manner. Each is brought to the direct attention of the CC by a specific report or complaint. The situation calls for immediate response by the CC. The RCPO is always involved in an adversary situation involving one or more recruits. The CC must fix responsibility and take some action, though possibly a holding action.

More subtle problems could also be included in the scenario. Unlike the crises, the presence of such problems would not be announced. The problem would be detected by the CC through routine monitoring of trainee performance in the course of scheduling decisions.

Our design is as follows. Each RCPO has one problem of this kind with a particular recruit. The difficulty shows up in degraded performance on the part of the recruit or the RCPO. No incidents are reported to the CC. He can only suspect that a recruit has a problem through observing slipping scores, and lack of response to treatment by instruction or practice. After making such observations, he may diagnose the problem through probing into RCPO/recruit difficulties by interviewing those involved.

An example of two specific problems of this kind follows.

1) If Baker is chosen as RCPO, he will give extra duty assignments to Able on various pretexts because he is resentful of Able's college background and academic abilities. Able does not complain but his scores go way down. Only by interviewing other recruits does the CC learn of these extra duty assignments. His only reasonable recourse is to replace Baker after Baker admits his unfair treatment of Able.

2) If Clement is chosen as RCPO, he is strongly intimidated by Goober to the point of failing to function effectively as RCPO. Goober refuses to accept Clement's authority and, in fact, undermines it with the other recruits. As a result, though individual performance scores are moderate, overall company morale is poor and inspection scores become very low. Clement will not admit that he has any problem. Other recruits must be queried to identify Clement's failure in leadership.

Incorporation of these more subtle problems involves a close coupling between the two major parts of the case study, the scheduling and the interactive dialogue subsystems. For example, one effect of the RCPO selection dialogue would be to modify specific performance measures of a particular recruit. The scheduling options would be extended to permit interviews of the RCPO or any recruit at any point. The CC must indicate the reason he wants to interview a designated trainee. An expanded menu selection will be provided for these interviews. If the CC succeeds in diagnosing the difficulty through this series of interviews, he may then wish to replace the RCPO, thus initiating a call to the RCPO selection dialogue.

APPENDIX A

RELATIONS BETWEEN EXPERIMENTAL GROUPS - TABLES OF ANOVA AND T-TESTS

TABLE 6. CC BACKGROUND DIFFERENCES

SUMMARY OF ANOVA

A. Age of CC, Experienced, Orlando

Group	Size	Mean
1	4	0.5896
2	7	0.5404
3	9	0.5130
4	3	0.6472
Total	23	0.5522

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	3	0.04749	0.01583	0.9912
Error	19	0.3033	0.01597	
Total	22	0.3508	0.01595	

B. Age of CC, Inexperienced, Orlando

Group	Size	Mean
1	8	0.5906
2	8	0.5906
3	7	0.6143
4	8	0.5479
Total	31	0.5849

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	3	0.01751	0.00584	0.642
Error	27	0.2453	0.00909	
Total	30	0.2628	0.00876	

C. PreMED Total, Experienced, Orlando

Group	Size	Mean
1	4	0.9062
2	7	0.9203
3	9	0.9210
4	3	0.8894
5	4	0.9090
Total	27	0.9133

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.002876	0.000719	1.198
Error	22	0.01320	0.000600	
Total	26	0.01607	0.000618	

TABLE 6. (continued)

D. Shadowing, Inexperienced, Orlando

Group	Size	Mean
1	7	0.3543
2	8	0.4350
3	8	0.4250
4	8	0.4350
5	6	0.4633
Total	37	0.4222

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.04512	0.01128	0.5293
Error	32	0.6819	0.02131	
Total	36	0.7270	0.02019	

TABLE 7. DEMOGRAPHIC COMPARABILITY OF COMPANIES

SUMMARY OF ANOVA

A. Postcompany Number, Experienced, Orlando

Group	Size	Mean
1	7	0.6333
2	9	0.5648
3	3	0.6333
4	4	0.5229
5	4	0.6458
Total	27	0.5960

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.05398	0.01350	1.951
Error	22	0.1522	0.00692	
Total	26	0.2061	0.00793	

B. Postcompany Number, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6357
2	8	0.6135
3	8	0.6510
4	8	0.5844
5	6	0.5792
Total	37	0.6140

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.02858	0.00714	1.0867
Error	32	0.2102	0.00657	
Total	36	0.2387	0.00663	

C. Postcompany GCT, Experienced, Orlando

Group	Size	Mean
1	4	0.5483
2	7	0.5527
3	9	0.5588
4	3	0.5463
5	4	0.5548
Total	27	0.5537

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.000525	0.000131	1.0234
Error	22	0.002822	0.000128	
Total	26	0.003347	0.000129	

TABLE 7. (continued)

D. Postcompany GCT, Inexperienced, Orlando

Group	Size	Mean
1	7	0.5574
2	8	0.5575
3	8	0.5494
4	8	0.5569
5	6	0.5575
Total	37	0.5556

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.000397	0.0000993	0.369
Error	32	0.008615	0.000269	
Total	36	0.009012	0.000250	

TABLE 8. PRETESTS

SUMMARY OF ANOVA

A. S. D. Materials Pretest Total (intents), Experienced, Orlando

Group	Size	Mean
1	4	0.7187
3	9	0.7102
4	3	0.6833
Total	16	0.7073

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.002323	0.001162	0.2766
Error	13	0.0546	0.004200	
Total	15	0.05692	0.003795	

B. S. D. Materials Pretest Total (intents), Inexperienced, Orlando

Group	Size	Mean
1	7	0.7405
3	8	0.7031
4	8	0.7604
Total	23	0.7344

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.0135	0.00678	1.8646
Error	20	0.07238	0.003619	
Total	22	0.08588	0.003903	

C. Pretest Total (Orlando Materials), Experienced, Orlando

Group	Size	Mean
1	4	0.6290
2	7	0.7143
4	3	0.7312
Total	14	0.6935

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.02391	0.01195	.899
Error	11	0.1462	0.01329	
Total	13	0.1701	0.01309	

TABLE 8. (continued)

D. Pretest Total (Orlando Materials), Inexperienced, Orlando

Group	Size	Mean
1	7	0.7201
2	8	0.6895
4	8	0.7944
	23	0.7377

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.0449	0.02245	2.302
Error	20	0.1951	0.009754	
Total	22	0.240	0.01091	

TABLE 9. PRE-POSTTEST CHANGE

SUMMARY OF ANOVA

A. ΔPre/Posttest Total, Experienced, Orlando

Group	Size	Mean
1	4	0.5686
2	7	0.5599
4	3	0.4677
Total	14	0.5426

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.02160	0.01080	3.082
" Error	11	0.03854	0.003504	
Total	13	0.06014	0.0046227	

B. ΔPre/Posttest Total, Inexperienced, Orlando

Group	Size	Mean
1	7	0.5622
2	8	0.5706
4	8	0.4859
Total	23	0.5386

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.03431	0.01715	10.33***
" Error	20	0.03320	0.001660	
Total	22	0.06750	0.003068	

***p<.005

TABLE 9. (continued)

C. ΔPre/Posttest Attributes, Experienced, Orlando

Group	Size	Mean	Category	Mean
1	4	0.5759	Clarifying	0.5893
2	7	0.5663	Concrete	0.4822
4	3	0.4583	Considerate	0.5536
Total	14	0.5459	Human	0.5536
			Reasonable	0.5447
			Relevant	0.5179
			Timely	0.5804

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	13	0.4585	0.03527	
" Groups	2	0.2066	0.1033	4.513*
" Error	11	0.2519	0.02290	
Within Subjects	84	1.647	0.01961	
Between Cats.	6	0.1126	0.01876	1.090
Cats. x Groups	12	0.3984	0.03320	1.929*
Within Error	66	1.136	0.01722	
Total	97	2.106	0.02171	

*p<.05

TABLE 9. (continued)

D. ΔPre/Posttest Attributes, Inexperienced, Orlando

Group	Size	Mean	Category	Mean
1	7	0.5561	Clarifying	0.5435
2	8	0.5647	Concrete	0.5381
4	8	0.4866	Considerate	0.5870
Total	23	0.5349	Human	0.5435
			Reasonable	0.4674
			Relevant	0.5544
			Timely	0.5109

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	22	0.5430	0.02059	
" Groups	2	0.2025	0.1012	8.083***
" Error	20	0.2505	0.01252	
Within Subjects	138	2.147	0.01556	
Between Cats.	6	0.1927	0.03212	2.148
Cats. x Groups	12	0.1596	0.01330	0.8892
Within Error	120	1.795	0.01625	
Total	160	2.600	0.01625	

***p<.005

TABLE 9. (continued)

E. ΔPre/Posttest Behaviors, Experienced, Orlando

Group	Size	Mean	Category	Mean
1	4	0.5719	Goal Setting	0.6107
2	7	0.5661	Feedback	0.5072
4	3	0.4542	Instruction	0.5134
Total	14	0.5438		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	13	0.1954	0.01503	
" Groups	2	0.09218	0.04609	4.913*
" Error	11	0.1032	0.009382	
Within Subjects	28	0.3691	0.01318	
Between Cats.	2	0.9444	0.04722	4.473*
Cats. x Groups	4	0.04237	0.01059	1.003
Within Error	22	0.2322	0.01056	
Total	41	0.5644	0.01377	

F. ΔPre/Posttest Behaviors, Inexperienced, Orlando

Group	Size	Mean	Category	Mean
1	7	0.5536	Goal Setting	0.5283
2	8	0.5734	Feedback	0.5478
4	8	0.4891	Instruction	0.5381
Total	23	0.5381		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	22	0.1847	0.008396	
" Groups	2	0.09271	0.04636	10.08***
" Error	20	0.09200	0.004600	
Within Subjects	46	0.2629	0.005715	
Between Cats.	2	0.004403	0.002202	0.3915
Cats. x Groups	4	0.03353	0.008383	1.491
Within Error	40	0.2250	0.005624	
Total	68	0.4476	0.006583	

* $p<.05$
***$p<.005$

TABLE 9. (continued)

G. ΔReward/Punishment, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6191
2	8	0.5417
4	8	0.4792
Total	23	0.5435

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.07309	0.03655	2.229
" Error	20	0.3279	0.01639	
Total	22	0.4010	0.01823	

H ΔReward/Punishment, Experienced, Orlando

Group	Size	Mean
1	4	0.5000
2	7	0.5000
4	3	0.5556
Total	14	0.5119

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.007276	0.003638	0.1662
" Error	11	0.2408	0.02189	
Total	13	0.2480	0.01908	

TABLE 10. SUMMARY OF T-TESTS ON PRE/POSTTEST DIFFERENCES

A. ΔPre/Posttest Total, Inexperienced, Orlando, by Group

Test	M_1	M_2	N_1	N_2	S_1	S_2	T
Grp 1 vs Grp 2	0.5622	0.5706	7	8	0.04311	0.05168	0.3179
Grp 2 vs Grp 4	0.5706	0.4859	8	8	0.05168	0.02187	-3.992!
Grp 1 vs Grp 4	0.5622	0.4859	7	8	0.04311	0.02187	-3.925!

- - - - - - - - - - -

B. ΔPre/Posttest Total, Experienced, Orlando, by Group

Grp 1 vs Grp 2	0.5686	0.5599	4	7	0.06634	0.06295	-0.1873
Grp 2 vs Grp 3	0.5599	0.4677	7	3	0.06295	0.02793	-2.844**
Grp 1 vs Grp 4	0.5686	0.4677	4	3	0.06634	0.02793	-2.339*

- - - - - - - - - - -

C. ΔPre/Posttest, Behaviors, Experienced, Matched, Orlando

Goal Set. vs FB	0.6107	0.5072			0.1095	0.1124	-2.38*
Feedback vs Inst.	0.5072	0.5134			0.1124	0.1074	0.1451
Goal Set. vs Inst.	0.6107	0.5134			0.1095	0.1074	-2.288*

* $p<.05$
**$p<.01$
! $p<.0025$

TABLE 11. RECRUIT QUESTIONNAIRE FIRST ADMINISTRATION

SUMMARY OF ANOVA

A. RQI Total, Inexperienced

Group	Size	Mean
1	7	0.7002
2	8	0.7061
3	7	0.6754
4	8	0.7032
5	6	0.6724
Total	36	0.6927

Source		df	Sum of Sq.	Mean Sq.	F
Between	Groups	4	0.007265	0.001816	1.405
"	Error	31	0.04007	0.001293	
Total		35	0.04734	0.001353	

B. RQI Total, Experienced

Group	Size	Mean
1	4	0.7174
2	7	0.6856
3	8	0.6573
4	3	0.6341
5	4	0.6711
Total	26	0.6736

Source		df	Sum of Sq.	Mean Sq.	F
Between	Groups	4	0.01553	0.003883	1.359
"	Error	21	0.05001	0.002857	
Total		25	0.07554	0.003022	

TABLE 11. (continued)

C. RQI Orlando Materials Total, Experienced, Orlando

Group	Size	Mean
1	4	0.7221
2	7	0.6857
3	8	0.6553
4	3	0.6114
5	4	0.6722
Total	26	0.6713

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.02458	0.006145	1.702
" Error	21	0.07583	0.003611	
Total	25	0.1004	0.004016	

D. RQI Orlando Materials Total, Inexperienced, Orlando

Group	Size	Mean
1	7	0.7005
2	8	0.6951
3	7	0.6657
4	8	0.6927
5	6	0.6612
Total	36	0.6843

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.008960	0.00224	1.203
" Error	31	0.05771	0.001862	
Total	35	0.06667	0.001905	

TABLE 11. (continued)

E. RQI Behaviors, Inexperienced, Orlando

Group	Size	Mean	Category	Mean
1	7	0.7165	Goal Setting	0.7662
2	8	0.7047	Feedback	0.5838
3	7	0.6523	Instruction	0.7212
4	8	0.7035		
5	6	0.6678		
Total	36	0.6904		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	35	0.3311	0.009460	
" Groups	4	0.06295	0.01574	1.819
" Error	31	0.2682	0.008650	
Within Subjects	72	0.8108	0.01126	
Between Cats.	2	0.6503	0.3252	144.3***
Cats. x Groups	8	0.02071	0.002589	1.149
Within Error	62	0.1397	0.002254	
Total	107	1.142	0.01067	

***p<.005

TABLE 11. (continued)

F. RQI Behaviors, Experienced, Orlando

Group	Size	Mean	Category	Mean
1	4	0.7356	Goal Setting	0.7593
2	7	0.6745	Feedback	0.5270
3	8	0.6533	Instruction	0.7182
4	3	0.6000		
5	4	0.6703		
Total	26	0.6681		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	25	0.4151	0.01661	
" Groups	4	0.1026	0.02564	1.723
" Error	21	0.3126	0.01488	
Within Subjects	52	0.9397	0.01807	
Between Cats.	2	0.7994	0.3997	129.4***
Cats. x Groups	8	0.01065	0.001331	0.4310
Within Error	42	0.1297	0.003088	
Total	77	1.355	0.01760	

***p<.005

TABLE 11. (continued)

G. RQI Attributes, Inexperienced, Orlando

Group	Size	Mean	Category	Mean
1	7	0.7295	Clarifying	0.7291
2	8	0.7313	Concrete	0.7532
3	7	0.7024	Considerate	0.6279
4	8	0.7258	Human	0.6646
5	6	0.6978	Reasonable	0.7792
Total	36	0.7185	Relevant	0.7297
			Timely	0.7461

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	35	0.4219	0.01205	
" Groups	4	0.04880	0.01220	1.014
" Error	31	0.3731	0.01204	
Within Subjects	216	0.9556	0.004424	
Between Cats.	6	0.6123	0.1020	62.53***
Cats. x Groups	24	0.03980	0.001658	1.016
Within Error	186	0.3035	0.001632	
Total	251	1.378	0.005488	

***p<.005

TABLE 11. (continued)

H. RQI Attributes, Experienced, Orlando

Group	Size	Mean	Category	Mean
1	4	0.7561	Clarifying	0.7252
2	7	0.7223	Concrete	0.7606
3	8	0.6892	Considerate	0.5912
4	3	0.6497	Human	0.6160
5	4	0.7066	Reasonable	0.7887
Total	26	0.7065	Relevant	0.7125
			Timely	0.7515

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	25	0.6381	0.02553	
" Groups	4	0.1659	0.04147	1.844
" Error	21	0.4723	0.02249	
Within Subjects	156	1.229	0.007881	
Between Cats.	6	0.7837	0.1456	55.31***
Cats. x Groups	24	0.02401	0.001000	0.3800
Within Error	126	0.3317	0.002633	
Total	181	1.868	0.01032	

***p<.005

TABLE 11. (continued)

I. RQI Reward/Punishment, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6550
2	8	0.6852
3	7	0.6381
4	8	0.6783
5	6	0.6179
Total	36	0.6574

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.02168	0.005420	1.495
" Error	31	0.1124	0.003625	
Total	35	0.1340	0.003830	

J. RQI Reward/Punishment, Experienced, Orlando

Group	Size	Mean
1	4	0.6407
2	7	0.6492
3	8	0.6690
4	3	0.5955
5	4	0.5728
Total	26	0.6360

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.03094	0.007734	1.587
" Error	21	0.1023	0.004873	
Total	25	0.1333	0.005331	

TABLE 11. (continued)

K. RQI Morale, Experienced, Orlando

Group	Size	Mean
1	4	0.6852
2	7	0.6652
3	8	0.6377
4	3	0.5976
5	4	0.6623
Total	26	0.6516

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.01658	0.004144	1.441
" Error	21	0.06040	0.002876	
Total	25	0.07698	0.003079	

L. RQI Morale, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6555
2	8	0.6589
3	7	0.6380
4	8	0.6534
5	6	0.6218
Total	36	0.6468

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.006338	0.001584	1.216
" Error	31	0.04039	0.001303	
Total	35	0.04673	0.001335	

TABLE 11. (continued)

M. RQI, S. D. Materials Total, Experienced, Orlando

Group	Size	Mean
1	3	0.6935
2	7	0.6738
3	7	0.6472
4	2	0.6344
5	4	0.6464
Total	23	0.6601

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.007916	0.001979	1.816
" Error	18	0.01962	0.001090	
Total	22	0.02753	0.001252	

N. RQI, S. D. Materials Total, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6784
2	6	0.7001
3	6	0.7002
4	8	0.7092
5	6	0.6625
Total	33	0.6909

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.009659	0.002415	2.221
" Error	28	0.03044	0.001087	
Total	32	0.04010	0.001253	

TABLE 12. RECRUIT QUESTIONNAIRE FIRST ADMINISTRATION

SUMMARY OF T-TESTS

A. RQI, Behaviors, Experienced, Orlando

$N_1=N_2=26$

Test	M_1	M_2	S_1	S_2	t
Goal Set. vs FB	0.7593	0.527	0.04937	0.1227	-9.231!
FB vs. Inst.	0.527	0.7182	0.1227	0.05395	7.132!
G-S vs Inst.	0.7593	0.7182	0.04937	0.05395	-3.523!

B. RQI, Behaviors, Inexperience, Orlando

$N_1=N_2=36$

Test	M_1	M_2	S_1	S_2	t
G-S vs FB	0.7662	0.5838	0.04937	0.09863	-9.786!
FB vs Inst.	0.5838	0.7212	0.09863	0.04335	7.545!
G-S vs Inst.	0.7662	0.7212	0.04937	0.04335	-4.056!

!$p<.0025$

TABLE 12. (continued)

C. RQI, Attributes, Experienced, Orlando

				$N_1=N_2=26$	
Test	M_1	M_2	S_1	S_2	t
Clar. vs Conc.	0.7252	0.7606	0.07113	0.0741	1.726*
Clar. vs Cons.	0.7252	0.5912	0.07113	0.112	-5.05!
Clar. vs Human	0.7252	0.616	0.07113	0.08126	-5.057!
Clar. vs Reas.	0.7252	0.7887	0.07113	0.04769	3.713!
Clar. vs Rel.	0.7252	0.7125	0.07113	0.07854	-0.5994
Clar. vs Timely	0.7252	0.7515	0.07113	0.04018	1.612
Conc. vs Cons.	0.7606	0.5912	0.0741	0.112	-6.309!
Conc. vs Human	0.7606	0.616	0.0741	0.08126	-6.557!
Conc. vs Reas.	0.616	0.7887	0.08126	0.04769	1.596
Conc. vs Rel.	0.7606	0.7125	0.0741	0.07854	-2.23*
Conc. vs Timely	0.7606	0.7515	0.0741	0.04018	-0.541
Cons. vs Human	0.5912	0.616	0.112	0.08126	0.8961
Cons. vs Reas.	0.5912	0.7887	0.112	0.04769	8.115!
Cons. vs Rel.	0.5912	0.7125	0.112	0.07854	4.434!
Cons. vs Timely	0.5912	0.7515	0.112	0.04018	6.737!
Human vs Reas.	0.616	0.7887	0.08126	0.04769	9.17!
Human vs Rel.	0.616	0.7125	0.08126	0.07854	4.27!
Human vs Timely	0.616	0.7515	0.08126	0.04018	7.476!
Reas. vs Rel.	0.7887	0.7125	0.04769	0.07854	-4.151!
Reas. vs Timely	0.7887	0.7515	0.04769	0.04018	-2.986!
Rel. vs Timely	0.7125	0.7515	0.07854	0.04018	2.212*

*p<.05
!p<.0025

TABLE 12. (continued)

D. RQI, Attributes, Inexperienced, Orlando

$N_1=N_2=36$

Test	M_1	M_2	S_1	S_2	t
Clar. vs Conc.	0.7291	0.7532	0.04954	0.05634	1.901*
Clar. vs Cons.	0.7291	0.6279	0.04954	0.07067	-6.942!
Clar. vs Human	0.7291	0.6646	0.04954	0.06394	-4.722!
Clar. vs Reas.	0.7291	0.7792	0.04954	0.0441	4.461!
Clar. vs Rel.	0.7291	0.7297	0.04954	0.06014	0.03862
Clar. vs Timely	0.7291	0.7461	0.04954	0.03989	1.577
Conc. vs Cons.	0.7532	0.6279	0.05634	0.07067	-8.207!
Conc. vs Human	0.7532	0.6646	0.05634	0.06394	-6.156!
Conc. vs Reas.	0.7532	0.7792	0.05634	0.0441	2.142*
Conc. vs Rel.	0.7532	0.7297	0.05634	0.06014	-1.694
Conc. vs Timely	0.7532	0.7461	0.05634	0.03989	-0.6133
Cons. vs Human	0.06279	0.6646	0.07067	0.06394	2.279*
Cons. vs Reas.	0.06279	0.07067	0.07067	0.0441	10.74!
Cons. vs Rel.	0.06279	0.7297	0.07067	0.06014	6.489!
Cons. vs Timely	0.06279	0.7461	0.07067	0.03989	8.619!
Human vs Reas.	0.6646	0.7792	0.06394	0.0441	8.726!
Human vs Rel.	0.6646	0.7297	0.06394	0.06014	4.386!
Human vs Timely	0.6646	0.7461	0.06394	0.03989	6.399!
Reas. vs Rel.	0.7792	0.7297	0.0441	0.06014	-3.927!
Reas. vs Timely	0.7792	0.7461	0.0441	0.03989	-3.289!
Rel. vs Timely	0.7297	0.7461	0.06014	0.03989	1.348

*$p<.05$
!$p<.0025$

TABLE 13. RECRUIT QUESTIONNAIRE, SECOND ADMINISTRATION (RQII)

SUMMARY OF ANOVA

A. RQII Total Score, Experienced, Orlando

Group	Size	Mean
1	3	0.7476
2	7	0.7160
3	8	0.6857
4	2	0.6347
5	4	0.7123
Total	24	0.7024

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.01919	0.004799	2.547
" Error	19	0.03580	0.001884	
Total	23	0.05499	0.002391	

B. RQII Total Score, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6973
2	7	0.7348
3	8	0.7341
4	8	0.7085
5	6	0.6840
Total	36	0.7131

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.01385	0.003462	1.656
" Error	31	0.0648	0.00209	
Total	35	0.07865	0.002247	

TABLE 13. (continued)

C. RQII Orlando Materials Total, Experienced, Orlando

Group	Size	Mean
1	3	0.7544
2	7	0.7130
3	8	0.6835
4	2	0.6224
5	4	0.7217
Total	24	0.7023

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.02603	0.006508	2.566
" Error	19	0.04818	0.002536	
Total	23	0.07421	0.003226	

D. RQII Orlando Materials Total, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6945
2	7	0.7344
3	8	0.7288
4	8	0.6959
5	6	0.6847
Total	36	0.7086

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.1105	0.003156	1.1246
" Error	31	0.09646	0.003112	
Total	35	0.1105	0.003156	

TABLE 13. (continued)

E. RQII Behaviors, Experienced, Orlando

Group	Size	Mean	Category	Mean
1	3	0.7704	Goal Setting	0.7646
2	7	0.7179	Feedback	0.6241
3	8	0.6862	Instruction	0.7243
4	2	0.6096		
5	4	0.7146		
Total	24	0.7043		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	23	0.2729	0.01187	
" Groups	4	0.1061	0.02653	3.022*
" Error	19	0.1668	0.00878	
Within Subjects	48	0.3965	0.00826	
Between Cats.	2	0.2512	0.1256	43.1615***
Cats. x Groups	8	0.03479	0.00435	1.495
Within Error	38	0.1106	0.00291	
Total	71	0.6694	0.00943	

* p<.05
***p<.005

TABLE 13. (continued)

F. RQII Behaviors, Inexperienced, Orlando

Group	Size	Mean	Category	Mean
1	7	0.7059	Goal Setting	0.7609
2	7	0.7397	Feedback	0.6636
3	8	0.7346	Instruction	0.7229
4	8	0.7056		
5	6	0.6880		
Total	36	0.7158		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	35	0.4073	0.01164	
" Groups	4	0.03893	0.00973	0.819
" Error	31	0.3683	0.01188	
Within Subjects	72	0.3296	0.00458	
Between Cats.	2	0.1732	0.08660	36.23***
Cats. x Groups	8	0.00811	0.00101	0.4225
Within Error	62	0.1483	0.00239	
Total	107	0.7369	0.00689	

***p<.005

TABLE 13. (continued)

G. RQII Attributes, Experienced, Orlando

Group	Size	Mean	Category	Mean
1	3	0.7721	Clarifying	0.7421
2	7	0.7323	Concrete	0.7104
3	8	0.7040	Considerate	0.6404
4	2	0.6421	Human	0.6949
5	4	0.7360	Reasonable	0.8089
Total	24	0.7210	Relevant	0.6994
			Timely	0.7497

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	23	0.5064	0.02202	
" Groups	4	0.1707	0.04266	2.414
" Error	19	0.3358	0.01767	
Within Subjects	144	0.6633	0.00461	
Between Cats.	6	0.4059	0.06765	35.794***
Cats. x Groups	24	0.04223	0.00176	0.931
Within Error	114	0.2151	0.00189	
Total	167	1.170	0.00700	

***p<.005

TABLE 13. (continued)

H. RQII Attributes, Inexperienced, Orlando

Group	Size	Mean	Category	Mean
1	7	0.7104	Clarifying	0.7406
2	7	0.7502	Concrete	0.6959
3	8	0.7495	Considerate	0.6674
4	8	0.7142	Human	0.7327
5	6	0.6996	Reasonable	0.7927
Total	36	0.7259	Relevant	0.7187
			Timely	0.7329

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	35	0.8138	0.02325	
" Groups	4	0.1085	0.02713	1.193
" Error	31	0.7053	0.02275	
Within Subjects	216	0.6460	0.00299	
Between Cats.	6	0.3296	0.05493	35.21***
Cats. x Groups	24	0.02554	0.00106	0.679
Within Error	186	0.2908	0.00156	
Total	251	1.460	0.005816	

***p<.005

TABLE 13. (continued)

I. RQII Reward/Punishment, Experienced, Orlando

Group	Size	Mean
1	3	0.6669
2	7	0.6095
3	8	0.5957
4	2	0.5525
5	4	0.5631
Total	24	0.5996

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.02417	0.006042	1.029
" Error	19	0.1116	0.005873	
Total	23	0.1358	0.005902	

J. RQII Reward/Punishment, Inexperienced, Orlando

Group	Size	Mean
1	7	0.5899
2	7	0.6659
3	8	0.6365
4	8	0.5897
5	6	0.6167
Total	36	0.6195

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.03063	0.007658	2.6673
" Error	31	0.08901	0.002871	
Total	35	0.1196	0.003418	

TABLE 13. (continued)

K. RQII Morale, Experienced, Orlando

Group	Size	Mean
1	3	0.7402
2	7	0.7072
3	8	0.7020
4	2	0.6500
5	4	0.7476
Total	24	0.7116

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.01610	0.004025	1.4803
" Error	19	0.05166	0.002719	
Total	23	0.06776	0.002946	

L. RQII Morale, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6732
2	7	0.7352
3	8	0.7124
4	8	0.6885
5	6	0.6984
Total	36	0.7016

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.01589	0.003972	1.472
" Error	31	0.08368	0.002699	
Total	35	0.09957	0.002845	

TABLE 13. (continued)

M. RQII, S. D. Materials Total, Experienced, Orlando

Group	Size	Mean
1	3	0.7153
2	7	0.7121
3	8	0.6780
4	2	0.6543
5	4	0.6713
Total	24	0.6895

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.01044	0.00261	1.135
" Error	19	0.04371	0.00230	
Total	23	0.05415	0.00236	

N. RQII, S. D. Materials Total, Inexperienced, Orlando

Group	Size	Mean
1	7	0.6963
2	7	0.7210
3	8	0.7350
4	8	0.7276
5	6	0.6684
Total	36	0.7120

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.0199	0.00498	2.649
" Error	31	0.05834	0.00188	
Total	35	0.07825	0.00224	

TABLE 14. RECRUIT QUESTIONNAIRE, SECOND ADMINISTRATION (RQII)

SUMMARY OF T-TESTS

A. RQII Groups, Experienced

Test	M_1	M_2	N_1	N_2	S_1	S_2	t
Grp 1 vs Grp 2	0.7544	0.713	3	7	0.04111	0.04772	-1.185
Grp 1 vs Grp 3	0.7544	0.6835	3	8	0.04111	0.04796	-2.069*
Grp 1 vs Grp 4	0.7544	0.6224	3	2	0.04111	0.09929	-1.276
Grp 1 vs Grp 5	0.7544	0.7217	3	4	0.04111	0.04151	-.8695
Grp 2 vs Grp 3	0.713	0.6835	7	8	0.04772	0.04796	-1.105
Grp 2 vs Grp 4	0.713	0.6224	7	2	0.04772	0.09929	-.0895
Grp 2 vs Grp 5	0.713	0.7217	7	4	0.04772	0.04151	+.282
Grp 3 vs Grp 4	0.6835	0.6224	8	2	0.04796	0.09929	-.6058
Grp 4 vs Grp 5	0.6224	0.7217	2	4	0.09929	0.04151	.9719

- - - - - - - - - - -

B. RQII, Behaviors, Experienced, Orlando

$N_1=N_2=24$

Test	M_1	M_2	S_1	S_2	t
G-S vs FB	0.7646	0.6241	0.06308	0.1039	-5.423!
FB vs Inst.	0.6241	0.7243	0.1039	0.05247	4.128!
G-S vs Inst.	0.7646	0.7243	0.06808	0.05247	-2.247!

- - - - - - - - - - -

C. RQII, Behaviors, Inexperienced, Orlando

$N_1=N_2=36$

Test	M_1	M_2	S_1	S_2	t
G-S vs FB	0.7609	0.6636	0.06099	0.09673	-5.035!
FB vs Inst.	0.6636	0.7229	0.09673	0.05503	3.151!
G-S vs Inst.	0.7609	0.7229	0.06099	0.05503	-2.471***

* $p<.05$
***$p<.005$
! $p<.0025$

TABLE 14. (continued)

D. RQII, Attributes, Experienced, Orlando

$N_1=N_2=24$

Test	M_1	M_2	S_1	S_2	t
Clar. vs Conc.	0.7421	0.7104	0.06142	0.07641	-1.572
Clar. vs Cons.	0.7421	0.6404	0.06142	0.08831	-4.535!
Clar. vs Human	0.7421	0.6949	0.06142	0.07786	-2.285*
Clar. vs Reas.	0.7421	0.8098	0.06142	0.05509	3.933!
Clar. vs Rel.	0.7421	0.6994	0.06142	0.07088	-2.185*
Clar. vs Timely	0.7421	0.7497	0.06142	0.04415	0.4825
Conc. vs Cons.	0.7104	0.6404	0.07461	0.08831	-2.905*
Conc. vs Human	0.7104	0.6949	0.07461	0.07786	-0.6926
Conc. vs Reas.	0.7104	0.8098	0.07461	0.05509	5.138!
Conc. vs Rel.	0.7104	0.6994	0.07461	0.07088	-0.5144
Conc. vs Timely	0.7104	0.7497	0.07461	0.04415	2.174*
Cons. vs Human	0.6404	0.6949	0.08831	0.07786	2.218*
Cons. vs Reas.	0.6404	0.8098	0.08831	0.05509	7.805!
Cons. vs Rel.	0.6404	0.6994	0.08831	0.07088	2.499**
Cons. vs Timely	0.6404	0.7497	0.08831	0.04415	5.311!
Human vs Reas.	0.6949	0.8098	0.07786	0.05509	5.779!
Human vs Rel.	0.6949	0.6994	0.07786	0.07088	0.2065
Human vs Timely	0.6949	0.7497	0.07786	0.04415	2.94**
Reas. vs Rel.	0.8098	0.6994	0.05509	0.07088	-5.898!
Reas. vs Timely	0.8098	0.7497	0.05509	0.04415	-4.08!
Rel. vs Timely	0.6994	0.7497	0.07088	0.04415	2.891**

* $p<.05$
**$p<.01$
! $p<.0025$

TABLE 14. (continued)

E. RQII, Attributes, Inexperienced, Orlando

$N_1=N_2=36$

Test	M_1	M_2	S_1	S_2	t
Clar. vs Conc.	0.7406	0.6959	0.06139	0.05488	-3.211!
Clar. vs Cons.	0.7406	0.6674	0.06139	0.08196	-4.232!
Clar. vs Human	0.7406	0.7327	0.06139	0.06791	-0.5106
Clar. vs Reas.	0.7406	0.7927	0.06139	0.07039	3.301!
Clar. vs Rel.	0.7406	0.7187	0.06139	0.08269	-1.26
Clar. vs Timely	0.7406	0.7329	0.06139	0.04887	-0.5796
Conc. vs Cons.	0.6959	0.6674	0.05488	0.08196	-1.713*
Conc. vs Human	0.6959	0.7327	0.05488	0.06791	2.493**
Conc. vs Reas.	0.6959	0.7927	0.05488	0.07039	6.416!
Conc. vs Rel.	0.6959	0.7187	0.05488	0.08269	1.357
Conc. vs Timely	0.6959	0.7329	0.05488	0.04887	2.979**
Cons. vs Human	0.6647	0.7327	0.08196	0.06791	3.3632!
Cons. vs Reas.	0.6647	0.7927	0.08196	0.07039	6.865!
Cons. vs Rel.	0.6647	0.7187	0.08196	0.08269	2.608**
Cons. vs Timely	0.6647	0.7329	0.08196	0.04887	4.065!
Human vs Reas.	0.7327	0.7927	0.06791	0.07039	3.63!
Human vs Rel.	0.7327	0.7127	0.06791	0.08269	-0.7758
Human vs Timely	0.7327	0.7329	0.06791	0.04887	.01517
Reas. vs Rel.	0.7927	0.7187	0.07039	0.08269	-4.034!
Reas. vs Timely	0.7927	0.7329	0.07039	0.04887	-4.128!
Rel. vs Timely	0.7187	0.7329	0.08269	0.04887	0.8775

* $p<.05$

**$p<.01$

! $p<.0025$

TABLE 15. ORLANDO RTC COMPANY PERFORMANCE

SUMMARY OF ANOVA

A. PostMED Average, Experienced

Group	Size	Mean
1	3	0.8957
2	7	0.9151
3	8	0.9154
4	3	0.8903
5	4	0.9210
Total	25	0.9109

Source		df	Sum of Sq.	Mean Sq.	F
Between	Groups	4	0.002679	0.0006697	1.762
"	Error	20	0.007599	0.0003800	
Total		24	0.01028	0.0004282	

B. PostMED Average, Inexperienced

Group	Size	Mean
1	7	0.9001
2	6	0.9005
3	5	0.8978
4	6	0.8796
5	4	0.8953
Total	28	0.8947

Source		df	Sum of Sq.	Mean Sq.	F
Between	Groups	4	0.001821	0.0004551	1.039
"	Error	23	0.01008	0.0004381	
Total		27	0.01190	0.0004406	

TABLE 15. (continued)

C. PostMEDs By Skill Area, Experienced

Group	Size	Mean	Category	Mean
1	3	0.8957	Personnel	0.9424
2	7	0.9154	Locker	0.9607
3	8	0.9154	Barracks	0.9417
4	3	0.8903	Infantry	0.9282
5	4	0.9210	Academic	0.7816
Total	25	0.9109		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	24	0.05138	0.002141	
" Groups	4	0.01339	0.003348	1.762
" Error	20	0.03799	0.001900	
Within Subjects	100	0.6250	0.006250	
Between Cats.	4	0.5357	0.1339	161.4***
Cats. x Groups	16	0.02283	0.001427	1.720*
Within Error	80	0.06639	0.0008299	
Total	124	0.6763	0.005454	

* p<.05
***p<.005

TABLE 15. (continued)

D. PostMEDs By Skill Area, Inexperienced

Group	Size	Mean	Category	Mean
1	7	0.9001	Personnel	0.9284
2	6	0.9005	Locker	0.9340
3	5	0.8978	Barracks	0.9315
4	6	0.8796	Infantry	0.9027
5	4	0.8953	Academic	0.7770
Total	28	0.8947		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	27	0.05949	0.002203	
" Groups	4	0.009105	0.002276	1.039
" Error	23	0.05039	0.002191	
Within Subjects	112	0.6585	0.005880	
Between Cats.	4	0.5028	0.1257	85.74***
Cats. x Groups	16	0.02083	0.001302	0.8878
Within Error	92	0.1349	0.001466	
Total	139	0.7180	0.005166	

***p<.005

TABLE 15. (continued)

E. Dropout Rate, Experienced

Group	Size	Mean
1	4	0.2255
2	7	0.2237
3	9	0.2808
4	3	0.2675
5	4	0.2076
Total	27	0.2455

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.02333	0.005832	0.821
" Error	22	0.1562	0.0071	
Total	26	0.1795	0.006905	

F. Dropout Rate, Inexperienced

Group	Size	Mean
1	7	0.1761
2	8	0.2851
3	8	0.2612
4	8	0.2155
5	6	0.2573
Total	37	0.2397

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	4	0.05502	0.01375	1.0185
" Error	32	0.4319	0.01350	
Total	36	0.4869	0.01353	

TABLE 15. (continued)

G. Morale, PLATO Opinion, Experienced

Group	Size	Mean	Category	Mean
1	2	0.5667	Morale	0.7833
2	6	0.5903	PLATO Opinion	0.4250
3	9	0.6139		
4	3	0.6278		
Total	20	0.6042		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	19	1.285	0.06761	
" Groups	3	0.01299	0.004329	0.054
" Error	16	1.272	0.07948	
Within Subjects	20	2.605	0.1303	
Between Cats.	1	1.284	1.284	18.130***
Cats. x Groups	3	0.0441	0.0147	0.2075
Within Error	16	1.277	0.07982	
Total	39	3.890	0.09974	

H. Morale, PLATO Opinion, Inexperienced

Group	Size	Mean	Category	Mean
1	7	0.7762	Morale	0.7357
2	8	0.7073	PLATO Opinion	0.[illegible]00
3	7	0.5917		
4	6	0.6944		
Total	28	0.6929		

Source	df	Sum of Sq.	Mean Sq.	F
Between Subjects	27	1.875	0.06945	
" Groups	3	0.2439	0.08131	1.196
" Error	24	1.631	0.06797	
Within Subjects	28	1.525	0.5445	
Between Cats.	1	0.1029	0.1029	1.902
Cats. x Groups	3	0.1237	0.04124	0.7624
Within Error	24	1.298	0.05409	
Total	55	3.400	0.06182	

***$p < .005$

Note: Items included in Morale and PLATO Opinion scores can be seen in Appendix B.2.

TABLE 16. ORLANDO RQII SCORED BY RECRUIT

A. Morale, Inexperienced

Group 3 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
3	2.688	2.642	449	796	1.348	1.38	0.5755
4	2.053	2.045	450	796	1.281	1.33	0.1057
5	1.171	1.177	451	798	1.189	1.183	-0.08516
6	3.686	3.747	449	791	1.069	1.071	-0.9673
7	2.234	2.013	449	800	1.503	1.45	2.5727**
8	3.463	3.489	449	793	1.259	1.256	-0.3501
9	2.234	2.013	449	800	1.503	1.45	2.527**
10	2.746	2.688	449	794	1.367	1.456	0.7065
11	0.8356	1.159	450	797	1.06	1.261	-4.827***
12	0.4213	0.5414	451	798	0.7355	0.8453	-2.621**
13	1.483	1.506	449	795	0.9416	0.9308	-0.4036
14	0.4232	0.568	449	801	0.6993	0.8336	-3.272***

Experimental group performance higher than control group
Total Q's: 7/12
Significant Q's only: 3/5

B. Morale, Experienced

Group 3 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
3	2.6	2.721	473	340	1.427	1.333	-1.229
4	2.015	2.065	476	341	1.343	1.407	-0.5079
5	1.16	1.238	474	340	1.232	1.238	-0.9062
6	3.683	3.773	470	339	1.037	1.004	-1.238
7	2.198	2.047	474	338	1.533	1.382	1.464
8	3.371	3.453	475	340	1.334	1.246	-0.9027
9	0.9495	1.106	475	341	1.208	1.338	-1.709*
10	2.951	2.926	472	339	1.407	1.487	0.2414
11	0.8629	0.791	474	335	1.093	1.199	0.8693
12	0.6878	0.5206	474	340	0.987	0.8521	2.579**
13	1.334	1.352	473	341	0.9347	0.9313	-0.2693
14	0.6554	0.6862	473	341	0.8312	0.8689	-0.5079

Experimental group performance higher than control group
Total Q's: 6/12
Significant Q's only: 1/2

TABLE 16. (continued)

C. Morale, Inexperienced

Group 2 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
3	2.816	2.642	364	796	1.325	1.38	2.046*
4	2.356	2.045	365	796	1.35	1.33	3.655***
5	1.165	1.177	364	798	1.174	1.183	-0.1591
6	3.801	3.747	361	791	1.07	1.071	0.7843
7	1.978	2.013	365	800	1.424	1.45	-0.3801
8	3.548	3.489	365	793	1.185	1.256	0.7672
9	1.518	1.685	363	796	1.373	1.582	-1.824*
10	2.717	2.688	360	794	1.357	1.456	0.3284
11	0.7452	1.159	365	797	0.9642	1.261	-6.139***
12	0.3123	0.5414	365	790	0.6333	0.8453	-5.123***
13	1.382	1.506	364	795	0.8515	0.9308	-2.228*
14	0.2893	0.568	363	801	0.547	0.8336	-6.771***

Experimental group performance higher than control group
Total Q's: 11/12**
Significant Q's only: 6/7

D. Morale, Experienced

Group 2 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
3	2.659	2.721	455	340	1.255	1.333	-0.6562
4	2.061	2.065	456	341	1.336	1.407	0.03153
5	1.224	1.238	455	340	1.151	1.19	-0.1669
6	3.607	3.773	456	339	1.056	1.004	-2.244**
7	2.059	2.047	457	338	1.455	1.382	0.1157
8	3.481	3.453	453	340	1.255	1.246	0.3151
9	1.233	1.106	455	341	1.385	1.338	1.308
10	2.864	2.926	450	379	1.427	1.487	-0.5873
11	0.7061	0.791	456	335	0.916	1.199	-1.083
12	0.453	0.5206	457	340	0.759	0.8521	-1.159
13	1.526	1.352	454	341	0.8845	0.9313	2.668**
14	0.5546	0.6862	458	341	0.7666	0.8689	-2.223*

Experimental group performance higher than control group
Total Q's: 7/12
Significant Q's only: 1/3

TABLE 16. (continued)

E. San Diego Materials Behaviors, Inexperienced

Group 3 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
15	0.6949	0.2759	449	801	0.7019	0.9335	8.955***
16	0.3911	0.1823	427	801	0.8498	0.9182	3.954***#
17	-0.8618	-0.8327	427	801	0.4015	0.4407	-1.168
18	0.6565	0.4987	428	798	0.708	0.7896	3.568***
19	0.8876	0.8627	427	801	0.4066	0.483	0.9556
20	0.243	0.2784	428	801	0.6498	0.6823	-0.8935
21	-0.3929	-0.2585	425	793	0.9119	0.9515	-2.413**
22	-0.9133	-0.7947	427	799	0.3679	0.5462	-4.51***
23	-0.5222	-0.7613	427	796	0.8305	0.6084	5.236***
24	-0.9603	-0.9687	428	798	0.248	0.213	0.5919
25	-0.9603	-0.76	428	800	0.2573	0.6402	-7.749***
26	-0.521	-0.4025	428	800	0.7896	0.8488	-2.439**
27	-0.09112	-0.1421	428	802	0.9588	0.9328	0.8965
28	0.637	0.7262	427	800	0.7319	0.6355	-2.126*
29	-0.6159	-0.5319	427	799	0.7575	0.8182	-1.797*
30	0.7822	0.7488	427	800	0.5782	0.619	0.9408
31	-0.185	-0.3279	427	799	0.9313	0.881	2.605**
32	-0.5129	-0.3915	427	797	0.8502	0.9099	-2.321**
33	-0.6472	-0.6324	428	797	0.739	0.7525	-0.3323
34	-0.2488	-0.1168	426	796	0.885	0.9107	-2.457**
35	0.4276	0.1591	428	798	0.887	0.9674	4.887***
36	0.6714	0.4137	426	788	0.6713	0.8499	5.793***
37	-0.8435	0.7607	428	798	0.5127	0.6185	-2.502**
38	0.7588	0.5578	427	796	0.6423	0.8116	4.741***
39	0.8188	0.7387	425	796	0.5158	0.6115	2.419**

Experimental group performance higher than control group
Total Q's: 18/24
Significant Q's only: 13/17

#Not included in scoring as there is a difference of opinion at RTC regarding this behavior.

TABLE 16. (continued)

F. San Diego Materials Behaviors, Experienced

Group 3 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
15	0.271	0.3	476	340	0.9326	0.9353	-0.4365
16	0.2156	0.3235	473	340	0.9057	0.8852	-1.695*#
17	-0.8716	-0.7611	475	339	0.376	0.5085	-3.389***
18	0.4684	0.5237	474	338	0.8191	0.7888	-0.9681
19	0.76	0.5744	475	336	0.6098	0.7833	3.629***
20	0.2648	0.3971	472	340	0.6763	0.689	-2.715**
21	-0.1966	-0.4956	473	341	0.9696	0.8584	4.636***
22	-0.916	-0.8798	476	341	0.3449	0.4266	-1.291
23	-0.895	-0.6246	476	341	0.3963	0.7542	-6.039***
24	-0.9347	-0.9441	475	340	0.3276	0.2967	0.4255
25	-0.8189	-0.8504	475	341	0.5628	0.5004	0.8403
26	-0.2511	-0.2991	474	341	0.9014	0.8723	0.7642
27	-0.6737	-0.6047	475	339	0.7203	0.7701	-1.292
28	0.5687	0.8088	473	340	0.7884	0.5493	-5.111***
29	-0.4388	-0.868	474	341	0.8503	0.4692	9.201***
30	-0.00422	-0.3666	474	341	0.9502	0.8651	5.652***
31	-0.1444	0.02941	471	340	0.9241	0.9263	-2.636**
32	-0.3143	-0.6422	474	341	0.9348	0.7588	5.51***
33	-0.8779	-0.5412	475	340	0.4327	0.3232	-6.882***
34	-0.09091	-0.2206	473	340	0.9231	0.905	1.996*
35	0.1568	0.1357	472	339	0.9681	0.9833	0.3028
36	0.339	0.3088	472	340	0.8827	0.8921	0.4768
37	-0.8114	-0.6979	472	341	0.5604	0.689	-2.499**
38	0.6949	0.5398	472	339	0.7072	0.8241	2.799**
39	0.5572	0.5396	472	341	0.7542	0.7595	0.3268

Experimental group performance higher than control group
Total Q's: 13/24
Significant Q's only: 8/14

#Not included in scoring as there is a difference of opinion at RTC regarding this behavior.

TABLE 16. (continued)

G. Orlando Materials Behaviors, Inexperienced

Group 2 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
40	3.354	3.244	365	799	0.9998	1.118	4.419***
41	4.362	4.025	365	799	0.8247	1.138	5.696***
42	1.394	1.530	363	794	1.188	1.275	-1.767*
43	4.180	3.829	361	790	1.025	1.213	5.075***
44	4.146	3.817	363	794	1.043	1.244	4.667***
45	2.887	2.992	363	797	1.665	1.678	-0.9963
46	3.848	3.596	363	790	1.241	1.336	3.126***
47	1.108	1.314	362	794	0.9956	1.122	-3.128***
48	0.843	1.189	363	790	1.065	1.271	-4.800***
49	2.978	2.859	361	786	1.232	1.391	1.457
50	4.403	4.014	362	793	0.9211	1.206	6.020***
51	3.526	3.443	363	792	1.249	1.254	1.046
52	0.8781	1.198	361	791	1.069	1.149	-4.602***
53	2.909	2.733	342	768	1.419	1.335	1.944*
54	4.213	4.050	362	794	0.9813	1.088	2.517**
55	2.961	3.134	363	794	1.571	1.549	-1.735*
56	3.901	3.711	362	790	1.125	1.201	2.589**
57	4.311	3.992	363	787	0.9817	1.225	4.716***
58	2.964	3.003	363	781	1.325	1.351	-1.167
59	0.7603	0.9354	363	789	1.031	1.147	-2.579**
60	0.6704	0.8744	361	788	1.081	1.177	-2.883***
61	1.967	1.790	362	784	1.274	1.325	2.160*
62	0.6527	0.8301	357	771	1.141	1.229	-2.367**
63	3.286	3.005	364	791	1.112	1.300	3.769***
64	3.696	3.354	362	785	1.169	1.321	4.411***
65	4.286	3.907	364	787	1.003	1.325	5.349***
66	0.6648	0.9987	361	778	1.043	1.351	-4.558***
67	4.074	3.830	363	788	1.090	1.373	3.245***
68	3.556	3.331	363	794	1.246	1.419	2.725**
69	4.050	3.741	363	790	1.156	1.298	4.049***
70	1.108	1.268	361	785	1.275	1.266	-1.969*
71	0.7535	0.9284	361	782	1.171	1.248	-2.296**
72	3.036	2.890	361	784	1.259	1.377	1.763*
73	0.7052	0.7066	363	777	1.380	1.322	-0.01534
74	2.950	2.674	362	786	1.295	1.406	3.260***
75	2.739	2.668	360	779	1.178	1.310	0.916
76	3.970	3.525	362	783	1.055	1.386	5.977***
77	2.248	2.093	363	778	1.270	1.335	1.891*
78	2.903	2.601	360	777	1.626	1.717	2.856***
79	1.890	1.760	362	780	1.342	1.491	1.460

TABLE 16. (continued)

Group 2 vs. 4,5

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
80	3.698	3.282	364	777	1.349	1.564	4.602***
81	4.316	3.960	364	779	1.090	1.288	4.838***
82	0.7022	0.9638	356	773	1.225	1.286	-3.276***
83	3.641	3.116	362	779	1.350	1.543	5.835***
84	3.106	3.218	360	774	1.325	1.394	-1.311
85	3.785	3.514	363	776	1.122	1.312	3.589***
86	2.921	2.765	356	778	1.249	1.313	1.925*
87	2.598	2.441	356	771	1.574	1.512	1.578
88	3.129	3.026	363	774	1.314	1.288	1.246
89	3.992	3.612	360	770	1.175	1.408	4.741***
90	3.552	3.405	359	776	1.319	1.366	1.723*
91	4.235	3.957	362	774	0.9875	1.207	4.097***
92	3.869	3.577	358	776	1.132	1.340	3.791***
93	3.981	3.677	363	778	1.092	1.344	4.046***
94	3.592	3.401	360	778	1.264	1.461	2.247**

Experimental group performance higher than control group
Total Q's: 48/55***
Significant Q's only: 42/44***

H. Orlando Materials Behaviors, Experienced

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
40	3.611	3.429	457	338	1.088	1.152	2.245**
41	4.409	4.257	457	338	0.8832	1.061	2.136*
42	1.272	1.563	452	334	1.180	1.302	-3.215***
43	4.230	3.958	456	335	1.081	1.233	3.224***
44	4.155	4.024	457	335	1.136	1.262	1.508
45	2.949	2.187	453	337	1.735	1.831	5.911***
46	4.098	4.211	457	337	1.150	1.181	-1.336
47	1.061	1.083	458	336	1.053	1.091	-0.2871
48	0.7456	0.7343	456	335	1.001	1.018	0.155
49	3.082	3.054	453	333	1.285	1.359	0.2877
50	4.132	4.077	454	338	1.169	1.164	0.6585
51	3.753	3.519	454	335	1.272	1.333	2.480**
52	0.8736	0.985	451	333	1.114	1.224	-1.306
53	2.872	2.933	439	326	1.504	1.462	-0.5545
54	4.022	3.882	454	338	1.116	1.277	1.611
55	2.640	2.540	453	335	1.703	1.711	0.8104
56	3.952	3.792	455	336	1.126	1.293	1.814*
57	4.142	4.003	457	335	1.163	1.289	1.562
58	3.027	2.676	452	333	1.347	1.409	3.509***

TABLE 16. (continued)

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
59	0.7626	0.8393	455	336	1.181	1.169	-0.9064
60	0.8308	0.908	455	337	1.226	1.361	-0.8223
61	1.593	1.388	450	335	1.312	1.255	2.220*
62	0.7916	0.8932	451	337	1.278	1.354	-1.066
63	3.051	3.140	453	336	1.174	1.278	-1.001
64	3.614	3.426	456	333	1.260	1.346	1.983*
65	4.029	3.794	451	335	1.230	1.400	2.443**
66	0.9732	1.143	447	336	1.419	1.517	-1.591
67	3.731	3.629	457	337	1.325	1.409	1.031
68	3.332	3.162	455	339	1.310	1.480	1.675*
69	3.782	3.585	455	335	1.282	1.451	1.981*
70	1.177	1.445	451	337	1.233	1.382	-2.813***
71	1.000	1.390	452	336	1.327	1.626	-3.590***
72	2.334	2.857	446	336	1.283	1.445	-0.2315
73	0.7022	0.7851	450	335	1.332	1.368	-0.8478
74	2.708	2.714	449	339	1.452	1.479	-0.0532
75	2.769	2.756	451	332	1.239	1.379	0.1398
76	3.723	3.513	448	337	1.336	1.454	2.070*
77	2.087	2.31	450	339	1.236	1.427	-2.297**
78	2.804	2.871	445	333	1.641	1.703	-0.5457
79	1.942	2.521	445	334	1.525	1.486	-5.319***
80	3.588	3.214	451	337	1.423	1.576	3.429***
81	4.038	3.677	452	334	1.321	1.496	3.509***
82	0.9018	1.089	448	336	1.344	1.403	-1.883*
83	3.172	2.887	453	336	1.508	1.573	2.560**
84	2.993	3.015	450	337	1.227	1.394	-0.225
85	3.757	3.794	449	335	1.233	1.259	-0.4079
86	2.585	2.304	446	332	1.398	1.519	2.635**
87	2.354	2.006	449	335	1.580	1.630	2.994***
88	3.000	2.931	449	333	1.358	1.449	0.6759
89	3.784	3.483	445	331	1.370	1.582	2.768**
90	3.422	3.054	448	332	1.446	1.586	3.318***
91	4.174	3.922	448	332	1.100	1.278	2.888***
92	3.818	3.494	450	336	1.241	1.404	3.355***
93	4.011	3.824	452	335	1.213	1.305	2.047*
94	3.547	3.458	450	336	1.420	1.509	0.8313

Experimental group performance higher than control group
Total Q's: 45/55***
Significant Q's only: 28/29***

* $p<.05$
** $p<.0125$
*** $p<.0025$

TABLE 17. T-TESTS FOR GROUP DIFFERENCES, USING LEVEL OF MOTIVATION, ORLANDO CCs, INEXPERIENCED

A. CCs Above Median in Motivation

	M_1	M_2	N_1	N_2	S_1	S_2	t
RQII Orl. Total							
Grp 1,2 vs 3,4	0.7144	0.6788	7	4	0.0723	0.0279	-1.040
RQII S.D. Total							
Grp 1,3 vs 2,4	0.6784	0.7097	4	7	0.056	0.0334	-0.8917
RQII Morale							
Grp 1,2 vs 3,4	0.721	0.6841	7	4	0.06313	0.04677	-0.9894
Grp 1,3 vs 2,4	0.6766	0.6841	4	7	0.06917	0.04677	0.155
Grp 1,2,3 vs 4	0.7137	0.6913	8	3	0.062	0.05452	-0.4977
PostCo MED Av.							
Grp 1,2 vs 3,4	0.9036	0.8535	7	4	0.0226	0.0398	-2.020*
Grp 1,3 vs 2,4	0.9042	0.8747	4	7	0.01275	0.04376	-1.526
Grp 1,2,3 vs 4	0.9015	0.8424	8	3	0.02172	0.0405	-1.984*
PostCo Dropouts							
Grp 1,2 vs 3,4	0.2216	0.189	7	4	0.1452	0.1233	-0.3515
Grp 1,3 vs 2,4	0.1118	0.2657	4	7	0.0348	0.1359	2.607**
Grp 1,2,3 vs 4	0.2054	0.2213	8	3	0.142	0.1286	0.1509

B. CCs Above Median in Attitude About PLATO Training

	M_1	M_2	N_1	N_2	S_1	S_2	t
RQII Orl. Total							
Grp 1,2 vs 3,4	0.7132	0.7073	11	7	0.06379	0.03932	-0.2284
PQII S.D. Total							
Grp 1,3 vs 2,4	0.706	0.7233	9	9	0.05677	0.03827	0.7155
RQII Morale							
Grp 1,2 vs 3,4	0.709	0.6925	11	7	0.06265	0.04741	-0.5945
Grp 1,3 vs 2,4	0.6918	0.7134	9	9	0.05633	0.05746	0.7588
Grp 1,2,3 vs 4	0.7093	0.6791	14	4	0.05756	0.05163	-0.8913
PostCo MED Av.							
Grp 1,2 vs 3,4	0.8977	0.8653	11	7	0.02367	0.03614	-1.957
Grp 1,3 vs 2,4	0.8965	0.8736	9	9	0.01864	0.03994	-1.470
Grp 1,2,3 vs 4	0.8933	0.8562	14	4	0.02372	0.04592	-1.357
PostCo Dropouts							
Grp 1,2 vs 3,4	0.2214	0.2217	11	7	0.1157	0.0829	0.0053
Grp 1,3 vs 2,4	0.1909	0.2522	9	9	0.086	0.1113	1.233
Grp 1,2,3 vs 4	0.2179	0.2342	14	4	0.1089	0.08205	0.2886

TABLE 17. (continued)

C. CCs Below Median in Motivation

	M_1	M_2	N_1	N_2	S_1	S_2	t
RQII Orl. Total							
Grp 1,2 vs 3,4	0.7145	0.7224	7	9	0.05022	0.03731	0.3226
RQII S.D. Total							
Grp 1,3 vs 2,4	0.7347	0.7347	10	6	0.04934	0.02772	0.00331
RQII Morale							
Grp 1,2 vs 3,4	0.6874	0.7034	7	9	0.05754	0.04108	0.5796
Grp 1,3 vs 2,4	0.6932	0.7017	10	6	0.04432	0.05733	0.2863
Grp 1,2,3 vs 4	0.6981	0.689	13	3	0.04615	0.06566	-0.187
PostCo MED Av.							
Grp 1,2 vs 3,4	0.8821	0.8752	8	9	0.03294	0.03585	-0.3888
Grp 1,3 vs 2,4	0.8838	0.8709	10	7	0.03277	0.0359	-0.7064
Grp 1,2,3 vs 4	0.8803	0.870	14	3	0.03451	0.03417	-0.3949
PostCo Dropouts							
Grp 1,2 vs 3,4	0.2453	0.2417	8	9	0.1275	0.08204	-0.06306
Grp 1,3 vs 2,4	0.2448	0.2414	10	7	0.0841	0.1317	-0.05601
Grp 1,2,3 vs 4	0.2523	0.2016	14	3	0.1087	0.06293	-0.943

D. CCs Below Median in Attitude About PLATO Training

	M_1	M_2	N_1	N_2	S_1	S_2	t
RQII Orl. Total							
Grp 1,2 vs 3,4	0.7192	0.711	3	6	0.05357	0.0441	-0.1925
RQII S.D. Total							
Grp 1,3 vs 2,4	0.7413	0.7166	5	4	0.05141	0.01521	-0.9078
RQII Morale							
Grp 1,2 vs 3,4	0.6866	0.7032	3	6	0.06046	0.03807	0.3608
Grp 1,3 vs 2,4	0.6824	0.7166	5	4	0.04227	0.04229	0.053
Grp 1,2,3 vs 4	0.6935	0.7121	7	2	0.03966	0.0716	0.2542
Post Co MED Av.							
Grp 1,2 vs 3,4	0.877	0.8724	4	6	0.04289	0.04085	-0.1504
Grp 1,3 vs 2,4	0.8772	0.8713	5	5	0.04287	0.04024	-0.2006
Grp 1,2,3 vs 4	0.8787	0.8562	8	2	0.04256	0.02065	-0.8591
PostCo Dropouts							
Grp 1,2 vs 3,4	0.2693	0.2299	4	6	0.1842	0.1146	-0.3337
Grp 1,3 vs 2,4	0.2354	0.2559	5	5	0.1142	0.1717	0.199
Grp 1,2,3 vs 4	0.2655	0.1661	8	2	0.1415	0.1233	-0.7396

* $p<.05$
**$p<.025$

TABLE 18. SAN DIEGO RTC COMPANY PERFORMANCE
SUMMARY OF STATISTICAL TESTS

A. Summary of ANOVAs For PostMED Average

Group	Size	Mean
1	6	0.7242
2	6	0.7578
3	4	0.7135
5	6	0.7040
Total	22	0.7259

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	3	0.009605	0.003202	1.670
Error	18	0.03451	0.001917	
Total	21	0.04411	0.002101	

B. Summary of ANOVAs For Dropout Rate

Group	Size	Mean
1	3	0.1731
2	1	0.3452
3	2	0.1817
5	6	0.1684
Total	12	0.1865

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	3	0.02775	0.009251	2.987
Error	8	0.02477	0.003097	
Total	11	0.05253	0.004775	

C. Summary of t-tests

	M_1	M_2	N_1	N_2	S_1	S_2	t
Dropout Rates							
Grp 1,2,3 vs 5	0.2046	0.1684	6	6	0.09114	0.03753	-0.8229
PostMED Average							
Grp 1,2 vs 5	0.741	0.704	12	6	0.05543	0.02667	-1.802*
Grp 1,3 vs 5	0.7199	0.704	10	6	0.01465	0.02667	-1.238
Grp 2 vs 5	0.7578	0.704	6	6	0.07654	0.02667	-1.484
Grp 3 vs 5	0.7135	0.704	4	6	0.01333	0.02667	-0.6736
Grp 1,2,3 vs 5	0.7341	0.704	16	6	0.04939	0.02667	-1.726*
Personnel MED							
Grp 1,2,3 vs 5	0.9569	0.8636	16	6	0.02787	0.03589	-5.035
Locker MED							
Grp 1,2,3 vs 5	0.939	0.8759	16	6	0.02925	0.03809	-3.385
Infantry MED							
Grp 1,2,3 vs 5	0.9008	0.8815	16	6	0.05671	0.04252	-0.8042

TABLE 18. (continued)

	M_1	M_2	N_1	N_2	S_1	S_2	t
Academic MED							
Grp 1,2,3 vs 5	0.8193	0.8988	16	6	0.04401	0.03131	4.409!
Background Measures							
GCT							
Grp 1,2,3 vs 5	0.547	0.5487	6	6	0.02277	0.02037	0.1221
PreMED							
Grp 1,2,3 vs 5	0.7146	0.7244	15	6	0.01471	0.01452	1.296

*p<.05
!p<.001

TABLE 19. RECRUIT QUESTIONNAIRES SAN DIEGO CCs, EXPERIENCED

SUMMARY OF ANOVA

A. RQI Total

Group	Size	Mean
1	2	0.6234
2	2	0.6248
3	2	0.6194
Total	6	0.6225

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.0000305	0.0000153	0.5282
Error	3	0.0000867	0.0000289	
Total	5	0.0001172	0.0000234	

B. RQII Total

Group	Size	Mean
1	3	0.6261
2	4	0.6275
3	2	0.6245
Total	9	0.6264

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.0000120	0.0000060	0.3867
Error	6	0.0000933	0.0000156	
Total	8	0.0001053	0.0000132	

C. RQII Orlando materials

Group	Size	Mean
1	3	0.6097
2	4	0.6110
3	2	0.6090
Total	9	0.6101

Source	df	Sum of Sq.	Mean Sq.	F
Between Groups	2	0.00000669	0.00000334	0.05813
Error	6	0.0003451	0.0000575	
Total	8	0.0003518	0.0000440	

TABLE 20. SAN DIEGO RQII SCORED BY RECRUIT, EXPERIENCED GROUP 2 vs. 3

A. Morale

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
3	1.483	1.397	302	136	1.344	1.341	0.6215
4	2.142	2.169	302	136	1.519	1.532	-0.1689
5	0.9631	0.8657	298	134	1.273	1.214	0.7575
6	3.834	3.86	301	136	1.314	1.273	-0.1982
7	2.477	2.515	302	136	1.513	1.576	-0.2349
8	2.854	2.881	301	135	1.520	1.525	-0.1747
9	1.95	2.058	302	139	1.400	1.423	-0.7365
10	2.444	2.412	302	136	1.353	1.347	0.2286
11	1.692	1.728	302	136	1.501	1.497	-0.2312
12	1.070	1.104	299	135	1.165	1.188	-0.2725
13	1.423	1.434	298	136	1.076	1.089	-0.09771
14	0.8007	0.7941	301	136	0.8393	0.8499	0.07461

Group 2 performance higher than Group 3
Total Q's: 6/12

B. San Diego Materials by Recruit

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
15	0.7583	0.6691	302	136	0.5736	0.6648	1.349
16	0.2445	0.2519	229	135	0.7601	0.7955	-0.08582#
17	-0.7609	-0.7279	297	136	0.4343	0.445	-0.7194
18	-0.1827	-0.1704	301	135	0.8332	0.8392	-0.142
19	0.5446	0.5639	303	133	0.7156	0.6975	-0.2639
20	0.3411	0.3382	302	136	0.7544	0.7298	0.03697
21	-0.4073	-0.4074	302	135	0.8116	0.8101	0.001457
22	-0.7881	-0.7941	302	136	0.4087	0.4043	0.1437
23	-0.6611	-0.6544	301	136	0.567	0.5737	-0.1133
24	-0.8472	-0.8382	301	136	0.395	0.4062	-0.2142
25	-0.5833	-0.5414	300	133	0.6902	0.7308	-0.559
26	-0.3953	-0.3857	301	136	0.7425	0.7492	-0.07287
27	-0.5449	-0.5147	301	136	0.7074	0.7275	-0.4032
28	-0.2781	-0.2206	302	136	0.7561	0.7543	-0.7361
29	-0.4934	-0.4779	302	136	0.6747	0.6748	-0.2208
30	0.2633	0.2687	300	134	0.775	0.7646	-0.6652
31	-0.1267	-0.1103	300	136	0.7284	0.7243	-0.2176
32	-0.3576	-0.3235	302	136	0.8043	0.8565	-0.3914
33	-0.3576	-0.363	302	135	0.8206	0.822	0.06267
34	-0.03311	-0.03676	302	136	0.7883	0.7803	0.04504
35	-0.54	-0.5588	300	136	0.736	0.7353	0.2468
36	0.3742	0.3603	302	136	0.7158	0.7037	0.1894

# Not included in scoring as there is a difference of opinion at RTC regarding this behavior.

TABLE 20. (continued)

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
37	-0.7209	-0.7132	301	136	0.5837	0.5929	-0.1258
38	0.7318	0.7059	302	136	0.6015	0.6315	0.4018
39	0.3754	0.3731	293	134	0.6831	0.6766	0.03229

Group 2 performance higher than Group 3
Total Q's: 7/24

C. Orlando Materials Section

40	2.765	2.839	302	137	1.148	1.204	-0.6077
41	3.361	3.324	299	136	1.036	1.248	0.3062
42	2.079	2.243	302	136	1.322	1.406	-1.142
43	3.478	3.452	301	135	1.246	1.554	0.1932
44	3.755	3.787	302	136	1.263	1.263	-0.2431
45	3.374	3.353	302	136	1.606	1.574	0.1294
46	3.311	3.243	302	136	1.306	1.348	0.4967
47	1.659	1.727	299	136	1.036	1.185	-0.5837
48	1.24	1.368	300	136	1.215	1.368	-0.9405
49	2.417	2.422	300	135	1.544	1.513	-0.0351
50	3.344	3.296	302	135	1.282	1.334	0.3512
51	3.063	3.096	302	136	1.405	1.47	-0.2176
52	1.312	1.309	301	136	1.154	1.292	.02676
53	2.589	2.448	302	134	1.37	1.347	1.005
54	3.841	3.64	301	136	1.19	1.407	1.442
55	3.745	3.941	302	136	1.316	1.116	-0.1602
56	3.458	3.467	301	134	1.45	1.449	-0.02792
57	4.027	3.82	301	135	1.181	1.314	1.487
58	2.701	2.807	301	135	1.333	1.385	-0.7479
59	2.142	2.184	302	136	1.532	1.506	-0.2642
60	1.51	1.765	302	136	1.466	1.573	-1.596
61	1.467	1.404	302	136	1.184	1.28	0.4822
62	0.6291	0.5758	302	132	1.004	0.8971	0.5479
63	2.577	2.659	300	135	1.36	1.378	-0.5788
64	2.688	2.691	301	136	1.461	1.443	-0.02311
65	3.391	3.375	299	136	1.425	1.48	0.1075
66	1.334	1.375	302	136	1.43	1.448	-0.2719
67	3.52	3.604	300	134	1.475	1.358	-0.5818
68	3.493	3.353	298	136	1.324	1.258	1.057
69	3.375	3.331	301	136	1.479	1.52	0.2851
70	1.893	2.096	299	136	1.192	1.387	-1.469
71	1.659	1.816	302	136	1.565	1.605	-0.953
72	2.193	2.215	301	135	1.577	1.584	-0.1346
73	1.315	1.206	302	136	1.663	1.637	0.638
74	2.083	2.066	301	136	1.533	1.568	0.1046

TABLE 20. (continued)

Question	M_1	M_2	N_1	N_2	S_1	S_2	t
75	2.268	2.311	302	135	1.533	1.542	-0.2684
76	2.874	2.897	302	136	1.402	1.416	-0.1566
77	2.807	2.993	301	136	1.484	1.484	-1.241
78	2.007	2.007	303	136	1.627	1.652	-0.00442
79	2.309	2.463	301	136	1.572	1.631	-0.9228
80	2.771	2.748	292	135	1.777	1.771	0.121
81	2.488	2.64	301	136	1.678	1.683	-0.8648
82	1.808	1.57	302	135	1.663	1.57	1.460
83	2.783	2.757	300	136	1.64	1.625	0.1538
84	1.659	1.548	302	135	1.609	1.613	0.6618
85	2.659	2.582	302	134	1.342	1.40	0.5339
86	1.897	2.089	301	135	1.593	1.63	-1.141
87	3.24	3.281	304	135	1.404	1.381	-0.2872
88	3.48	3.881	300	134	1.544	1.414	-2.641**
89	3.199	3.051	301	136	1.46	1.442	0.9857
90	3.518	3.397	301	136	1.211	1.357	0.8904
91	3.596	3.612	302	134	1.172	1.171	-0.1305
92	2.696	2.89	312	136	1.428	1.474	-1.291
93	2.454	2.551	302	136	1.464	1.547	-0.6206
94	2.387	2.507	300	136	1.52	1.43	-0.7981

Group 2 performance higher than Group 3
Total Q's: 27/55

**p<.0125

APPENDIX B.1

B.1.1 CC QUESTIONNAIRE WITH SCORING KEY

On the following pages, you will find 63 questions which are being asked of all recruits going through RTC. These questions ask what the recruits think about their company, their Company Commander, and life in the Navy.

With the questionnaire is a Self-Rating Form for you to use. Please follow the instructions on this Self-Rating Form to keep a record of how you are doing. Companies which do well in training tend to rate their CC's in a certain way on these questions, as noted on the form. We will ask you to return this form to us near the end of the training period. This information and all other information in this project will be kept confidential. It will be used only for research to improve RTC, and you will not be associated with any of the information we collect from you or your company.

SELF-RATING FORM

Rate yourself and your company on the form attached by recording how you think the average recruit in your company would answer the items on the following pages. Record an answer for each question near the end of each week of training (through week 7) by filling in the column under the appropriate week. After each item number, there is a rating number in parenthesis. This number tells you how highly-rated companies (which do well in training) rate their CC's.

Circle the items where there are two or more numbers between your rating and the number in parenthesis (for instance, if your rating is 4 and the number in parenthesis is 1). Pay special attention to the items which you circle. They are the areas where you should try to improve.

For example, if your answer to the third item on the questionnaire is 3 after the first week of training, then you would write a 3 in the row numbered 3 and the column numbered 1, and so forth. In this case, since there are two numbers between your answer (3) and the number in parenthesis (6), you should pay special attention to this item. Remember, answer the items as you think the average recruit in your company would answer them.

Name ______________________________ Co. Number ____________

	Week of Training						
	1	2	3	4	5	6	7
1 (4)							
2 (1)							
3 (6)							
4 (2)							
5 (5)							
6 (2)							
7 (5)							
8 (2)							
9 (5)							
10 (5)							
11 (2)							
12 (6)							
13 (6)							
14 (5)							
15 (6)							
16 (1)							
17 (1)							
18 (5)							
19 (6)							
20 (6)							
21 (1)							
22 (5)							
23 (6)							
24 (5)							
25 (6)							
26 (6)							
27 (5)							
28 (1)							
29 (1)							
30 (1)							
31 (1)							
32 (5)							

	Week of Training						
	1	2	3	4	5	6	7
33 (5)							
34 (6)							
35 (1)							
36 (5)							
37 (5)							
38 (6)							
39 (1)							
40 (1)							
41 (5)							
42 (1)							
43 (4)							
44 (5)							
45 (6)							
46 (2)							
47 (5)							
48 (2)							
49 (6)							
50 (6)							
51 (1)							
52 (5)							
53 (5)							
54 (6)							
55 (5)							
56 (5)							
57 (3)							
58 (6)							
59 (5)							
60 (6)							
61 (6)							
62 (6)							
63 (6)							

1. So far:

    (a) I dislike boot camp quite a lot
    (b) I dislike boot camp slightly
    (c) I like boot camp slightly
    (d) I like boot camp fairly well
    (e) I like boot camp quite a lot
    (f) I really like boot camp very much

2. I think that the training I am receiving at boot camp will be:

    (a) extremely valuable to me later on in the Navy
    (b) quite valuable to me later on in the Navy
    (c) fairly valuable to me later on in the Navy
    (d) slightly valuable to me later on in the Navy
    (e) of almost no value to me later on in the Navy
    (f) worthless to me later on in the Navy

3. After boot camp, I expect that:

    (a) I will dislike the Navy quite a lot
    (b) I will dislike the Navy slightly
    (c) I will like the Navy slightly
    (d) I will like the Navy fairly well
    (e) I will like the Navy quite a lot
    (f) I will really like the Navy very much

4. If I had to guess right now about how likely I am to reenlist when my first hitch is up, I would say:

    (a) I'm sure that I will reenlist
    (b) I probably will reenlist
    (c) I'm slightly in favor of reenlisting
    (d) I'm slightly in favor of not reenlisting
    (e) I probably will not reenlist
    (f) I'm sure that I will not reenlist

5. If a civilian friend of mine were thinking of joining the Navy

    (a) I would definitely tell him not to join
    (b) I would probably tell him not to join
    (c) I would be slightly more likely to tell him not to join
    (d) I would be slightly more likely to tell him to join
    (e) I would probably tell him to join
    (f) I would definitely tell him to join

6. I think that my company is:

    (a) definitely the best at RTC
    (b) one of the best at RTC
    (c) far above average
    (d) slightly above average
    (e) slightly below average
    (f) far below average

7. I think that the morale in my company is:

    (a) far below average
    (b) slightly below average
    (c) slightly above average
    (d) far above average
    (e) higher than almost all of the other companies
    (f) definitely the highest of all companies

8. Compared to the other CC's at RTC, I think that my CC is:

    (a) definitely the best at RTC
    (b) one of the best at RTC
    (c) much better than the average CC
    (d) slightly better than the average CC
    (e) slightly worse than the average CC
    (f) much worse than the average CC

For each item below, please circle one number on the answer sheet to show how the statement applies to you.

9. When my CC explains something to the company, every recruit understands what he says.

10. When our CC tells us what we need to know to do a job, he tells us in the clearest possible way.

11. My CC only explains things generally and doesn't get into specific details.

12. When my CC explains something, he makes sure everyone understands before going on to something else.

13. When my CC tells us what he wants us to do, he explains all the steps that are required to do it.

14. My CC sets specific goals for the CO. (Like "I want to see a 3.5 in academics next week.")

15. My CC has the company's full attention when he talks.

16. It's easy to forget what our CC tells us.

17. My CC wastes a lot of time on things that aren't really important.

18. My CC can tell whether we understand what he says just by looking at us.

19. My CC is very willing to answer our questions.

20. My CC demonstrates things to us by running through them himself.

21. My CC tries to tell us something when we are listening to or busy with something else.

22. My CC gives us information about a job close to when we are working on that job.

23. My CC repeats important things often.

24. If my CC notices an example of what he's been telling us, he points it out to us (like "See that company marching? That's how I want you to look.").

25. My CC tells us what is most important to work on.

26. My CC encourages us to ask questions about things we don't understand.

27. My CC asks specific questions of individual recruits to see if they understand something.

28. My company can't do a good job because my CC doesn't give us enough time to do it.

29. My CC expects the impossible from the company.

30. My CC is too easy on us.

31. Even if we had all the time in the world, we couldn't do the things our CC asks of us.

32. After my CC explains what he wants, the recruits like doing it for him.

33. My CC gives us good reasons for the things we do.

34. My CC treats us like human beings.

35. My CC acts like a machine.

36. My CC tells us how the skills we learn at RTC are going to make us better sailors.

37. My CC tells us how what we do every day will help us get through RTC.

38. My CC is aware of the morale of the company.

39. My CC makes recruits feel unimportant.

40. My CC tries to make us think he's perfect.

41. I feel that I know my CC pretty well.

42. My CC doesn't care one way or another about how the company does.

43. My CC asks recruits how they feel about things.

44. My CC can tell when a recruit is feeling bad just by looking at him.

45. My CC expresses confidence in the company's ability.

46. My CC gets mad very easily when we can't get something right.

47. My CC calls us by our own names (or something friendly like "Son").

48. If a recruit fouls up, my CC calls him names (like idiot, dumb-ass, worm, etc.).

49. My CC treats all recruits equally.

50. If my CC doesn't know something, he admits he doesn't know it.

51. My CC tries to hide it when he does something wrong.

52. My CC often tells us about how the company's performance makes him feel good (like saying "I'm proud of you.").

53. My CC tells us about his experiences in the Navy.

54. My CC has a good sense of humor.

55. If the company does poorly on something, my CC takes part of the blame himself.

56. When a recruit does a good job on something, my CC gives him a reward (like a smoke break, use of the stereo, and so on).

57. When a recruit does something wrong, my CC gives him some punishment (like push-ups, loss of smoke breaks, and so on).

58. When my CC gives a recruit a reward or punishment, he tells the recruit exactly (in detail) what the reason is.

59. My CC tells us what goals he wants us to reach.

60. My CC teaches us how to be good recruits.

61. My CC tells us how well we are doing.

62. My CC is good at motivating the men.

63. My CC emphasizes correcting rather than punishing mistakes.

ORLANDO HANDOUT AND CC SURVEY SCORING KEY

[A plus (+) means that a higher choice (in the range a-g) is a positive result, a minus (-) indicated a negative contribution of a higher choice to total score.]

Recruit Questionnaire Item No.	Handout Item No.	Attribute	Behavior	
4	1	Morale (+)	--	
5	2	Morale (-)	--	Morale Subset
6	3	Morale (+)	--	
7	4	Morale (-)	--	
8	5	Morale (+)	--	
9	6	Morale (-)	--	
10	7	Morale (+)	--	
11	8	Morale (-)	--	
40	9	Clarifying (+)	--	
41	10	Clarifying (+)	--	
42	11	Concrete (-)	I	
43	12	Clarifying (+)	I	
44	13	Concrete (+)	I	
45	14	Concrete (+)	GS	
46	15	Timely (+)	I	
47	16	Timely (-)	I	
48	17	Timely (-)	I	
49	18	Clarifying (+)	I	
50	19	Clarifying (+)	I	
51	20	Concrete (+)	I	
52	21	Timely (-)	I	
53	22	Timely (+)	I	
54	23	Timely (+)	I	
55	24	Timely (+)	I	
56	25	Timely?(+)	GS	
57	26	Clarifying (+)	I	
58	27	Clarifying (+)	I	
59	28	Reasonable (-)	GS	
60	29	Reasonable (-)	GS	
61	30	Reasonable (-)	--	

Scoring Key (cont'd)

Recruit Questionnaire Item No.	Handout Item No.	Attribute	Behavior
62	31	Reasonable (-)	GS
63	32	--- (+)	I
64	33	Relevant (+)	I
65	34	Considerate (+)	--
66	35	Human (-)	--
67	36	Relevant (+)	I
68	37	Relevant (+)	I
69	38	Considerate (+)	--
70	39	Considerate (-)	--
71	40	Human (-)	--
72	41	Human (+)	--
73	42	Human (-)	--
74	43	Human (+)	--
75	44	Considerate (+)	--
76	45	Considerate (+)	--
77	46	Considerate (-)	--
78	47	Considerate (+)	--
79	48	Considerate (-)	--
80	49	Considerate (+)	--
81	50	Human (+)	--
82	51	Human (-)	--
83	52	Human (+)	FB
84	53	Human (+)	I
85	54	Human (+)	--
86	55	Human (+)	FB
87	56	-- (+)	Rew. & Pun.
88	57	-- (+)	Rew. & Pun.
89	58	-- (+)	Rew. & Pun.
90	59	--- (+)	GS
91	60	--- (+)	I
92	61	--- (+)	FB
93	62	Motivating (+)	--
94	63	--- (+)	FB

ORLANDO MATERIALS CC SURVEY

Now that your company is nearing the end of the training period, it is time to return the Self-Rating Form which you were provided at PLATO training (the form which you filled out weekly). Please send it to NTEC, Code N-215.

In case your Self-Rating Form is unavailable, we have attached another copy of the questions. Please circle one answer on the answer sheet for each question to indicate how you think the average recruit in your company would answer it. Remember, there is no need to fill out the attached questionnaire if you are returning your filled-out Self-Rating Form.

All information collected by the PLATO Project will be used for research purposes only and will not be used for any official rating of you or your company.

1. So far:

   (a) I dislike boot camp quite a lot
   (b) I dislike boot camp slightly
   (c) I like boot camp slightly
   (d) I like boot camp fairly well
   (e) I like boot camp quite a lot
   (f) I really like boot camp very much

2. I think that the training I am receiving at boot camp will be:

   (a) extremely valuable to me later on in the Navy
   (b) quite valuable to me later on in the Navy
   (c) fairly valuable to me later on in the Navy
   (d) slightly valuable to me later on in the Navy
   (e) of almost no value to me later on in the Navy
   (f) worthless to me later on in the Navy

3. After boot camp, I expect that:

   (a) I will dislike the Navy quite a lot
   (b) I will dislike the Navy slightly
   (c) I will like the Navy slightly
   (d) I will like the Navy fairly well
   (e) I will like the Navy quite a lot
   (f) I will really like the Navy very much

4. If I had to guess right now about how likely I am to reenlist when my first hitch is up, I would say:

   (a) I'm sure that I will reenlist
   (b) I probably will reenlist
   (c) I'm slightly in favor of reenlisting
   (d) I'm slightly in favor of not reenlisting
   (e) I probably will not reenlist
   (f) I'm sure that I will not reenlist

5. If a civilian friend of mine were thinking of joining the Navy:

   (a) I would definitely tell him not to join
   (b) I would probably tell him not to join
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   (f) I would definitely tell him to join

6. I think that my company is:

   (a) definitely the best at RTC
   (b) one of the best at RTC
   (c) far above average
   (d) slightly above average
   (e) slightly below average
   (f) far below average

7. I think that the morale in my company is:

   (a) far below average
   (b) slightly below average
   (c) slightly above average
   (d) far above average
   (e) higher than almost all of the other companies
   (f) definitely the highest of all companies

8. Compared to the other CC's at RTC, I think that my CC is:

   (a) definitely the best at RTC
   (b) one of the best at RTC
   (c) much better than the average CC
   (d) slightly better than the average CC
   (e) slightly worse than the average CC
   (f) much worse than the average CC

For each item below, please circle one number on the answer sheet to show how the statement applies to you.

---

9. When my CC explains something to the company, every recruit understands what he says.

10. When our CC tells us what we need to know to do a job, he tells us in the clearest possible way.

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15. My CC has the company's full attention when he talks.

16. It's easy to forget what our CC tells us.

17. My CC wastes a lot of time on things that aren't really important.

18. My CC can tell whether we understand what he says just by looking at us.

19. My CC is very willing to answer our questions.

20. My CC demonstrates things to us by running through them himself.

21. My CC tries to tell us something when we are listening to or busy with something else.

22. My CC gives us information about a job close to when we are working on that job.

23. My CC repeats important things often.

24. If my CC notices an example of what he's been telling us, he points it out to us (like "See that company marching? That's how I want you to look.")

25. My CC tells us what is most important to work on.

26. My CC encourages us to ask questions about things we don't understand.

27. My CC asks specific questions of individual recruits to see if they understand something.

28. My company can't do a good job because my CC doesn't give us enough time to do it.

29. My CC expects the impossible from the company.

30. My CC is too easy on us.

31. Even if we had all the time in the world, we couldn't do the things our CC asks of us.

32. After my CC explains what he wants, the recruits like doing it for him.

33. My CC gives us good reasons for the things we do.

34. My CC treats us like human beings.

35. My CC acts like a machine.

36. My CC tells us how the skills we learn at RTC are going to make us better sailors.

37. My CC tells us how what we do every day will help us get through RTC.

38. My CC is aware of the morale of the company.

39. My CC makes recruits feel unimportant.

40. My CC tries to make us think he's perfect.

41. I feel that I know my CC pretty well.

42. My CC doesn't care one way or another about how the company does.

43. My CC asks recruits how they feel about things.

44. My CC can tell when a recruit is feeling bad just by looking at him.

45. My CC expresses confidence in the company's ability.

46. My CC gets mad very easily when we can't get something right.

47. My CC calls us by our own names (or something friendly like "Son").

48. If a recruit fouls up, my CC calls him names (like idiot, dumb-ass, worm, etc.).

49. My CC treats all recruits equally.

50. If my CC doesn't know something, he admits he doesn't know it.

51. My CC tries to hide it when he does something wrong.

52. My CC often tells us about how the company's performance makes him feel good (like saying "I'm proud of you.").

53. My CC tells us about his experiences in the Navy.

54. My CC has a good sense of humor.

55. If the company does poorly on something, my CC takes part of the blame himself.

56. When a recruit does a good job on something, my CC gives him a reward (like a smoke break, use of the stereo, and so on).

57. When a recruit does something wrong, my CC gives him some punishment (like push-ups, loss of smoke breaks, and so on).

58. When my CC gives a recruit a reward or punishment, he tells the recruit exactly (in detail) what the reason is.

59. My CC tells us what goals he wants us to reach.

60. My CC teaches us how to be good recruits.

61. My CC tells us how well we are doing.

62. My CC is good at motivating the men.

63. My CC emphasizes correcting rather than punishing mistakes.

Company Number ________________

Today's Date ____________________ Day of Training ________________

1. a b c d e f
2. a b c d e f
3. a b c d e f
4. a b c d e f
5. a b c d e f
6. a b c d e f
7. a b c d e f
8. a b c d e f

	NEVER	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	ALWAYS
9.	1	2	3	4	5	6
10.	1	2	3	4	5	6
11.	1	2	3	4	5	6
12.	1	2	3	4	5	6
13.	1	2	3	4	5	6
14.	1	2	3	4	5	6
15.	1	2	3	4	5	6
16.	1	2	3	4	5	6
17.	1	2	3	4	5	6
18.	1	2	3	4	5	6
19.	1	2	3	4	5	6
20.	1	2	3	4	5	6
21.	1	2	3	4	5	6
22.	1	2	3	4	5	6
23.	1	2	3	4	5	6
24.	1	2	3	4	5	6
25.	1	2	3	4	5	6
26.	1	2	3	4	5	6
27.	1	2	3	4	5	6
28.	1	2	3	4	5	6
29.	1	2	3	4	5	6
30.	1	2	3	4	5	6
31.	1	2	3	4	5	6
32.	1	2	3	4	5	6
33.	1	2	3	4	5	6
34.	1	2	3	4	5	6
35.	1	2	3	4	5	6
36.	1	2	3	4	5	6

	NEVER	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	ALWAYS
37.	1	2	3	4	5	6
38.	1	2	3	4	5	6
39.	1	2	3	4	5	6
40.	1	2	3	4	5	6
41.	1	2	3	4	5	6
42.	1	2	3	4	5	6
43.	1	2	3	4	5	6
44.	1	2	3	4	5	6
45.	1	2	3	4	5	6
46.	1	2	3	4	5	6
47.	1	2	3	4	5	6
48.	1	2	3	4	5	6
49.	1	2	3	4	5	6
50.	1	2	3	4	5	6
51.	1	2	3	4	5	6
52.	1	2	3	4	5	6
53.	1	2	3	4	5	6
54.	1	2	3	4	5	6
55.	1	2	3	4	5	6
56.	1	2	3	4	5	6
57.	1	2	3	4	5	6
58.	1	2	3	4	5	6
59.	1	2	3	4	5	6
60.	1	2	3	4	5	6
61.	1	2	3	4	5	6
62.	1	2	3	4	5	6
63.	1	2	3	4	5	6

B.1.2 SAN DIEGO MATERIALS CC QUESTIONNAIRE

Below is a list of 25 behaviors. The commanding officer and MTO of RTC approve of some of these behaviors and disapprove of others, as indicated. Look over the list and remember to perform in accordance with the commanding officer and MTO. Review this list as you go through training to see if you are complying.

A company commander:

1. Should pre-check lockers prior to inspection.
2. Should ask another company commander to inspect the company during primary training.
3. Should give out demerits as a form of discipline.
4. Should have a 10 or 15 minute private talk with each setback.
5. Should ask other company commanders to help teach infantry.
6. Should attend most instructor-conducted classes.
7. Should discipline individual recruits in private.
8. Should have more than two E.P.O.'s in his company.
9. Should pre-inspect his company on evaluation days.
10. Should learn the last name of every member of his company.

A company commander:

1. Should not try to be ahead of schedule in teaching IG lessons.*
2. Should not allow recruits to finish fights they start among themselves.
3. Should not punish the whole company when three recruits lose points in personal inspection.
4. Should not tell the company to ignore a recruit as a form of discipline.
5. Should not tell the recruits that he doesn't believe in "setting back."

---

*Not scored since there was a difference of opinion at MTO regarding this behavior.

6. Should not fake a beating with a recruit in order to scare the company.
7. Should not allow the RPO's to give physical training as a form of discipline.
8. Should not back up an RPO who has exceeded his authority.
9. Should not leave the company pretty much on its own during service week.
10. Should not allow the company to use "cheating gear."
11. Should not allow an EPO to handle most questions after TV classes.
12. Should not punish the whole company when three recruits lose points on a locker inspection.
13. Should not select a setback as the RCPO.
14. Should not try to hide a recruit who might cost the company points.
15. Should not discipline a recruit in front of the whole company.

SAN DIEGO MATERIALS CC SURVEY

Please indicate on this questionnaire whether you have or have not performed each of the behaviors. This is part of the PLATO Project in which you participated. All information collected by the PLATO Project will be used for research purposes only and will not be used for any official rating of you or your company. Please send this form to NTEC, Code N-215.

	Did you:	Yes	No	Don't Know
1.	Pre-check lockers prior to an inspection.			
2.	Try to be ahead of schedule in teaching IG lessons.			
3.	Allow recruits to finish fights they started among themselves.			
4.	Ask other company commanders to inspect the company during primary training.			
5.	Give out demerits as a form of discipline.			
6.	Have a 10 or 15 minute private talk with each setback.			
7.	Punish the whole company when three recruits lost points in personal inspection.			
8.	Tell the company to ignore a recruit as a form of discipline.			
9.	Tell your recruits that you don't believe in "setting back."			
10.	Fake a beating with a recruit in order to scare the company.			

	Did you:	Yes	No	Don't Know
11.	Allow your RPO's to give physical training as a form of discipline.			
12.	Back up an RPO who exceeded his authority			
13.	Ask other company commanders to help teach infantry.			
14.	Leave the company pretty much on its own during service week.			
15.	Allow the company to use "cheating gear."			
16.	Attend most instructor-conducted classes.			
17.	Allow an EPO to handle most questions after TV classes.			
18.	Punish the whole company when three recruits lost points in locker inspection.			
19.	Select a setback as RCPO.			
20.	Discipline individual recruits in private.			
21.	Have more than two EPO's in the company.			
22.	Pre-inspect the company on evaluation days.			
23.	Try to hide a recruit who might cost the company points.			
24.	Discipline a recruit in front of the whole company.			
25.	Learn the last name of every member of the company.			

APPENDIX B.2

CC ATTITUDE FORM

This is a part of the PLATO Project in which you participated. Please make one response for each question below, and return this form to NAVTRAEQUIPCEN Code N-215. All information collected by the PLATO Project is confidential and will not be used for official ratings of you.

	STRONGLY AGREE 6	MODERATELY AGREE 5	SLIGHTLY AGREE 4	SLIGHTLY DISAGREE 3	MODERATELY DISAGREE 2	STRONGLY DISAGREE 1
1. Being a cc is a job that continually allows me to learn something worthwhile.		X				
2. My work as a cc is interesting enough to talk about with people not involved in recruit training.		X				
3. I like the actual work involved in being a cc.		X				
4. Being a cc won't affect anything in the long run.	X					
5. Even if my company were the best, I wouldn't win the competition.						X
6. Too many politics are involved in selecting companies that brigade.				X		
7. The tougher I act, the better my company does.				X		
8. Its important for me to achieve the highest MED scores possible for my company.	X					
9. If I could re-organize my work as a cc, I could do the job more effectively.			X			
10. I could do more as a cc if I had more freedom to determine how to accomplish my objectives.	X					
11. When pushing a company, I'm usually able to arrange much of my own schedule with regard to when things are done.		X				
12. I tried very hard to use what I learned in the PLATO training program.		X				
13. The PLATO training program was very helpful to me.		X				

SCORING KEY FOR CC ATTITUDE FORM

Question		
1	RTC OPINION	(+)
2		(+)
3		(+)
4		(-)
5		(-)
6		(-)
7	----	
8	----	
9	----	
10	----	
11	----	
12	PLATO TRAINING OPINION	(+)
13		(+)

APPENDIX B.3

RECRUIT QUESTIONNAIRE

This survey is being conducted as part of a research project concerned with recruit training. Please answer the questions that follow as honestly as you can. Use the answer sheets for recording your responses. The results will be used for research purposes only, and will not be used for any official rating of you, your company, or your Company Commander. Your Company Commander will not see your answers; the only people to see the answers will be the research team.

(Scoring for this form is the same as for the corresponding CC survey forms.)

Please fill in the information requested on the answer sheet.

Please answer the following by circling the letter on the answer sheet corresponding to the choice which you feel best answers the question:

1. What is your educational level?

   (a) grammar school only
   (b) some high school
   (c) high school graduate
   (d) some college
   (e) college graduate

2. Why did you join the Navy? Pick only one answer, the most important one.

   (a) for travel and adventure
   (b) for educational opportunities
   (c) wanted to serve my country
   (d) wanted a secure job
   (e) interest in the sea and ships
   (f) couldn't find a good civilian job

3. The discipline in boot camp has been:

   (a) much more strict than I thought it would be
   (b) somewhat more strict than I thought it would be
   (c) slightly more strict than I thought it would be
   (d) slightly less strict than I thought it would be
   (e) somewhat less strict than I thought it would be
   (f) much less strict than I thought it would be

4. So far:

   (a) I dislike boot camp quite a lot
   (b) I dislike boot camp slightly
   (c) I like boot camp slightly
   (d) I like boot camp fairly well
   (e) I like boot camp quite a lot
   (f) I really like boot camp very much

5. I think that the training I am receiving at boot camp will be:

   (a) extremely valuable to me later on in the Navy
   (b) quite valuable to me later on in the Navy
   (c) fairly valuable to me later on in the Navy
   (d) slightly valuable to me later on in the Navy
   (e) of almost no value to me later on in the Navy
   (f) worthless to me later on in the Navy

6. After boot camp, I expect that:

(a) I will dislike the Navy quite a lot
(b) I will dislike the Navy slightly
(c) I will like the Navy slightly
(d) I will like the Navy fairly well
(e) I will like the Navy quite a lot
(f) I will really like the Navy very much

7. If I had to guess right now about how likely I am to reenlist when my first hitch is up, I would say:

(a) I'm sure that I will reenlist
(b) I probably will reenlist
(c) I'm slightly in favor of reenlisting
(d) I'm slightly in favor of not reenlisting
(e) I probably will not reenlist
(f) I'm sure that I will not reenlist

8. If a civilian friend of mine were thinking of joining the Navy:

(a) I would definitely tell him not to join
(b) I would probably tell him not to join
(c) I would be slightly more likely to tell him not to join
(d) I would be slightly more likely to tell him to join
(e) I would probably tell him to join
(f) I would definitely tell him to join

9. I think that my company is:

(a) definitely the best at RTC
(b) one of the best at RTC
(c) far above average
(d) slightly above average
(e) slightly below average
(f) far below average

10. I think that the morale in my company is:

(a) far below average
(b) slightly below average
(c) slightly above average
(d) far above average
(e) higher than almost all of the other companies
(f) definitely the highest of all companies

11. Compared to the other CC's at RTC, I think that my CC is:

    (a) definitely the best at RTC
    (b) one of the best at RTC
    (c) much better than the average CC
    (d) slightly better than the average CC
    (e) slightly worse than the average CC
    (f) much worse than the average CC

12. How do you feel about your company commander?

    (a) I have great respect for him
    (b) I have respect for him
    (c) I have slight respect for him
    (d) I neither respect nor fear him
    (e) I have a slight fear of him
    (f) I have a fear of him
    (g) I have a great fear of him

13. During boot camp:

    (a) I've tried harder than anyone else to be a good recruit
    (b) I've tried harder than most to be a good recruit
    (c) I've tried a little more than the average man to be a good recruit
    (d) I've tried about average to be a good recruit
    (e) I've tried less than the average man to be a good recruit
    (f) I haven't tried at all to be a good recruit

14. Does your company commander show an interest in his recruits and their problems?

    (a) shows definite interest in his recruits and their problems
    (b) shows somewhat of an interest in his recruits and their problems
    (c) shows slight interest in his recruits and their problems
    (d) shows no interest in his recruits and their problems

We would like to know if your company commander performed certain behaviors. For each behavior, place a check mark in the appropriate column of your answer sheet.

Did your company commander . . .

15. pre-check lockers prior to an inspection

16. try to be ahead of schedule in teaching IG lessons

17. allow recruits to finish fights they started among themselves

18. ask other company commanders to inspect the company during primary training

19. give out demerits as a form of discipline

20. have a 10 or 15 minute private talk with each setback

21. punish the whole company when 3 recruits lost points in personal inspection

22. tell the company to ignore a recruit as a form of discipline

23. tell the company that he didn't believe in setting back recruits

24. fake a beating with a recruit in order to scare the company

25. allow the RPO's to give physical training (such as push-ups) as a form of discipline

26. back up a RPO who exceeded his authority

27. ask other company commanders to help him teach infantry

28. leave the company pretty much on its own during service week

29. allow the company to use cheating gear

30. attend most instructor conducted classes

31. let the EPO handle most questions after TV classes

32. punish the whole company when 3 recruits lost points in locker inspection

33. select a setback as the RCPO

Did your company commander . . .

34. discipline recruits in private

35. have more than two EPO in the company

36. pre-inspect the company on evaluation days

37. try to hide a recruit who might cost the company points

38. discipline a recruit in front of the whole company

39. learn the last name of every member of the company

For each item below, please circle one number on the answer sheet to show how the statement applies to your CC.

40. When my CC explains something to the company, every recruit understands what he says.

41. When our CC tells us what we need to know to do a job, he tells us in the clearest possible way.

42. My CC only explains things generally and doesn't get into specific details.

43. When my CC explains something, he makes sure everyone understands before going on to something else.

44. When my CC tells us what he wants us to do, he explains all the steps that are required to do it.

45. My CC sets specific goals for the CO. (Like "I want to see a 3.5 in academics next week.")

46. My CC has the company's full attention when he talks.

47. It's easy to forget what our CC tells us.

48. My CC wastes a lot of time on things that aren't really important.

49. My CC can tell whether we understand what he says just by looking at us.

50. My CC is very willing to answer our questions.

51. My CC demonstrates things to us by running through them himself.

52. My CC tries to tell us something when we are listening to or busy with something else.

53. My CC gives us information about a job close to when we are working on that job.

54. My CC repeats important things often.

55. If my CC notices an example of what he's been telling us, he points it out to us (like "See that company marching? That's how I want you to look.")

56. My CC tells us what is most important to work on.

57. My CC encourages us to ask questions about things we don't understand.

58. My CC asks specific questions of individual recruits to see if they understand something.

59. My company can't do a good job because my CC doesn't give us enough time to do it.

60. My CC expects the impossible from the company.

61. My CC is too easy on us.

62. Even if we had all the time in the world, we couldn't do the things our CC asks of us.

63. After my CC explains what he wants, the recruits like doing it for him.

64. My CC gives us good reasons for the things we do.

65. My CC treats us like human beings.

66. My CC acts like a machine.

67. My CC tells us how the skills we learn at RTC are going to make us better sailors.

68. My CC tells us how what we do every day will help us get through RTC.

69. My CC is aware of the morale of the company.

70. My CC makes recruits feel unimportant.

71. My CC tries to make us think he's perfect.

72. I feel that I know my CC pretty well.

73. My CC doesn't care one way or another about how the company does.

74. My CC asks recruits how they feel about things.

75. My CC can tell when a recruit is feeling bad just by looking at him.

76. My CC expresses confidence in the company's ability.

77. My CC gets mad very easily when we can't get something right.

78. My CC calls us by our own names (or something friendly like "Son").

79. If a recruit fouls up, my CC calls him names (like idiot, dumb-ass, worm, etc.).

80. My CC treats all recruits equally.

81. If my CC doesn't know something, he admits he doesn't know it.

82. My CC tries to hide it when he does something wrong.

83. My CC often tells us about how the company's performance makes him feel good (like saying "I'm proud of you.").

84. My CC tells us about his experiences in the Navy.

85. My CC has a good sense of humor.

86. If the company does poorly on something, my CC takes part of the blame himself.

87. When a recruit does a good job on something, my CC gives him a reward (like a smoke break, use of the stereo, and so on).

88. When a recruit does something wrong, my CC gives him some punishment (like push-ups, loss of smoke breaks, and so on).

89. When my CC gives a recruit a reward or punishment, he tells the recruit exactly (in detail) what the reason is.

90. My CC tells us what goals he wants us to reach.

91. My CC teaches us how to be good recruits.

92. My CC tells us how well we are doing.

93. My CC is good at motivating the men.

94. My CC emphasizes correcting rather than punishing mistakes.

Company Number ________________

Today's Date __________________ Day of Training ____________

Are you an RPO? Yes ________ No ________

Are you married? Yes ________ No ________ Age ________

1. a b c d e
2. a b c d e f
3. a b c d e f
4. a b c d e f
5. a b c d e f
6. a b c d e f
7. a b c d e f
8. a b c d e f
9. a b c d e f
10. a b c d e f
11. a b c d e f
12. a b c d e f g
13. a b c d e f
14. a b c d

	Yes	No	Don't Know
15.	___	___	___
16.	___	___	___
17.	___	___	___
18.	___	___	___
19.	___	___	___
20.	___	___	___
21.	___	___	___
22.	___	___	___
23.	___	___	___
24.	___	___	___
25.	___	___	___
26.	___	___	___
27.	___	___	___
28.	___	___	___
29.	___	___	___
30.	___	___	___
31.	___	___	___
32.	___	___	___
33.	___	___	___
34.	___	___	___
35.	___	___	___
36.	___	___	___
37.	___	___	___
38.	___	___	___
39.	___	___	___

	NEVER	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	ALWAYS
40.	1	2	3	4	5	6
41.	1	2	3	4	5	6
42.	1	2	3	4	5	6
43.	1	2	3	4	5	6
44.	1	2	3	4	5	6
45.	1	2	3	4	5	6
46.	1	2	3	4	5	6
47.	1	2	3	4	5	6
48.	1	2	3	4	5	6
49.	1	2	3	4	5	6
50.	1	2	3	4	5	6
51.	1	2	3	4	5	6
52.	1	2	3	4	5	6
53.	1	2	3	4	5	6
54.	1	2	3	4	5	6
55.	1	2	3	4	5	6
56.	1	2	3	4	5	6
57.	1	2	3	4	5	6
58.	1	2	3	4	5	6
59.	1	2	3	4	5	6
60.	1	2	3	4	5	6
61.	1	2	3	4	5	6
62.	1	2	3	4	5	6
63.	1	2	3	4	5	6
64.	1	2	3	4	5	6
65.	1	2	3	4	5	6
66.	1	2	3	4	5	6
67.	1	2	3	4	5	6

	NEVER	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS	ALWAYS
68.	1	2	3	4	5	6
69.	1	2	3	4	5	6
70.	1	2	3	4	5	6
71.	1	2	3	4	5	6
72.	1	2	3	4	5	6
73.	1	2	3	4	5	6
74.	1	2	3	4	5	6
75.	1	2	3	4	5	6
76.	1	2	3	4	5	6
77.	1	2	3	4	5	6
78.	1	2	3	4	5	6
79.	1	2	3	4	5	6
80.	1	2	3	4	5	6
81.	1	2	3	4	5	6
82.	1	2	3	4	5	6
83.	1	2	3	4	5	6
84.	1	2	3	4	5	6
85.	1	2	3	4	5	6
86.	1	2	3	4	5	6
87.	1	2	3	4	5	6
88.	1	2	3	4	5	6
89.	1	2	3	4	5	6
90.	1	2	3	4	5	6
91.	1	2	3	4	5	6
92.	1	2	3	4	5	6
93.	1	2	3	4	5	6
94.	1	2	3	4	5	6

APPENDIX C

PRE/POSTTESTS FOR ORLANDO BASED MATERIALS

A. PRETEST

1. Recruit Murphy is in danger of being set back. He has done very poorly on his academic tests.

   a) "Murphy, you could be set back because of your poor academics. See if you can get a 4.0 next time."

   b) "Murphy, you need to improve a lot on your academic scores. I want to see a 4.0 next time."

   c) "Murphy, you need to show a lot of improvement in your academic scores. Try to get at least a 2.5 next time."

   d) "Murphy, you could be set back if your academics don't improve. Try for at least a 2.5 next time."

   e) "say nothing."

2. Ferguson asks if he's doing an about face properly (he's not pivoting correctly).

   a) "No, that's not correct. You need more practice."

   b) "No, your pivot is not correct. Do another one for me."

   c) "No, pivot like this (demonstrates). Now you do one for me."

   d) "No, you do your pivot like this (demonstrates)."

   e) say nothing.

3. Three recruits are reporting back after being disciplined by Batt staff.

   a) "I don't want to see you bastards fouling up any more."

   b) Tell them tomorrow, "I don't want any more foulups from you dumb-asses."

   c) Wait until later and say, "You men hadn't better foul up any more."

d) "I don't want to see any more foulups from you men."

e) say nothing.

4. Truman's bunk is made up perfectly (it's very early in training).

a) "You are doing very well, Truman."

b) "That bunk is made up just like the book says, Truman."

c) "Perfect bunk, Truman, That will help us on our MED scores."

d) "You are doing a fine job, Truman.

e) say nothing.

5. Johnson has his notebook in his pocket backwards.

a) "You've got your notebook in your pocket backwards. That could get us a streetmark."

b) Wait until next IG period and say to Johnson, "Notebooks stowed backwards can get us streetmarks."

c) Before next inspection, say to Johnson, "Make sure you don't have your notebook in your pocket backwards."

d) "You've got your notebook in your pocket backwards. Don't let me see it that way again."

e) say nothing.

6. During a shore indoctrination session, recruits are questioning the strict regulations they will be under after they leave boot camp.

a) "It's not for you to question these regulations and it's not for me to give you reasons."

b) "When I was a recruit, I thought these regulations were pretty strict; but you might wind up in a hard-assed command in the fleet, and these rules will help prepare you."

c) "These regulations seemed pretty strict to me when I was a recruit too, but they are just something you will have to live with."

d) "These regulations will help prepare you for lh:: in the fleet, especially if you wind up in a real hard-assed command."

e) say nothing.

7. Thomas is marching out of step.

a) "You are not marching right, Thomas. I'm sure you can do better."

b) "Thomas, you are marching out of step."

c) "Thomas, you are not marching properly."

d) "You are out of step, Thomas. I know you can do better than that."

e) say nothing.

8. Nothing specific is wrong with Young's locker, but it could be a little neater.

a) "That locker could be neater, Young."

b) "That's a good enough locker, Young."

c) "Recruit, that locker looks o.k."

d) "Recruit, that locker is not neat enough."

e) say nothing.

9. The company is scattered around the barracks, practicing clothes folding. You have just found out about a change in tomorrow's schedule.

a) "Everybody listen up. The infantry inspection that we were supposed to have tomorrow has been moved to the next day."

b) "Tomorrow's infantry inspection has been moved to the next day."

c) "That infantry inspection we were going to have tomorrow has been postponed to the next day, understand."

d) "Everyone give me your attention. The infantry inspection that was going to be tomorrow has been moved to the next day. Everyone got that?"

e) say nothing.

10. MED locker and barracks scores were down a little last week, and academics dropped below minimum.

a) "You guys need to improve on lockers, barracks, and academics; especially on academics.

b) "We have to do better on our lockers, barracks, and academics."

c) "We have to improve our lockers, barracks, and academics; especially our academics."

d) "You guys have to start doing better in lockers, barracks, and academics."

e) say nothing.

11. Your first squad leader, Blake, did very well for the first several weeks. However, for the last few days he has seemed disturbed, and you just found out that he did very poorly on the last academic test.

a) "You haven't been doing so well, Blake. Shape up."

b) "You really messed up the last academic test, Blake. Is anything bothering you?"

c) "You haven't been doing too well, Blake. Is anything wrong?"

d) "You blew the last academic test, Blake. Shape up."

e) say nothing.

12. Your company has an unusually low GCT average, and they failed the first two academic tests.

    a) "We need to work on those academic scores. Let's get at least a satisfactory average next time."

    b) "Get busy on those academics. I want to see the average come up to at least satisfactory next time."

    c) "We'd better not worry about getting a satisfactory score in academics. Let's work on our other MED's."

    d) "I'm not going to worry about getting a satisfactory academic average. Let's work on the other MED's."

    e) say nothing.

13. The company is asking about the hits they got for gear adrift at barracks inspection. They got hit because you told them they could put their extra gear in their laundry bags, which isn't true.

    a) "Extra gear is supposed to go in your luggage. It does not go in your laundry bags. I told you wrong about that."

    b) "Extra gear does not go in your laundry bags. It goes in your luggage. I told you wrong about that. Does everybody understand now?"

    c) "Extra gear is supposed to be put in your luggage, not in your laundry bags. Everybody understand that?"

    d) "You put extra gear in your luggage, not in your laundry bags."

    e) say nothing.

14. The recruits have just been instructed for the first time on general orders.

    a) "Everyone should know their general orders perfectly by day after tomorrow; understand?"

    b) "I want everyone to know their general orders perfectly in one hour; understand?"

c) "All of you should know your general orders perfectly by day after tomorrow."

d) "Everybody should know their general orders perfectly one hour from now."

e) say nothing.

15. Hoover's shoes are not shined. You mentioned this to him twice already.

a) "Get those shoes shined as soon as possible."

b) "Quit screwing around."

c) "Alright, give me 20 pushups. Get started."

d) "You can do 20 pushups for not having those shoes shined."

e) say nothing.

16. Your company just had its first barracks inspection. The area which the fourth squad took care of is the only one where there were no hits.

a) "Alright, we are going to practice cleaning the barracks. Fourth squad take a break."

b) "The fourth squad can take a break for their performance on barracks inspection. Everyone else will practice cleaning the barracks."

c) "Some of you did pretty well on barracks inspection but some of you didn't. We are going to practice on it some more now."

d) "We are going to work on barracks cleaning now. The fourth squad may take an extra break tomorrow."

e) say nothing.

17. You instructed the company on bunk makeup for the first time today. You notice that Jones' sheet is too loose.

a) Make a mental note to emphasize bunks in the next IG period.

b) "Jones, that loose sheet just cost you 50 jumping jacks. Get started."

c) "Jones, the sheet on your bunk needs to be tighter, fix it."

d) "Jones, you get no smoke breaks for two days because of that loose sheet."

e) say nothing.

TABLE 21. PRETEST SCORING KEY

Question #	Goal Setting	Feedback	Instruction	Clarifying	Concrete	Considerate	Humane	Reasonable	Relevant	Timel
1	a,c,d							c,d	a,d	
2			b,c,d	b,c	c,d					
3	a,c,d					c,d				a,d
4		b,c,d			b,c				c,d	
5		a,b,d							a,b	a,[illegible]
6			b,c,d				b,c		b,d	
7		a,b,d			b,d	a,d				
8		a,b,d				a,b		a,d		
9			a,c,d	c,d						a,[illegible]
10	a,b,c						b.c			[illegible],c
11		b,c,d			b,d	b,c				
12	a,b,c						a,c	a,b		
13			a,b,c	b,c			a,b			
14	a,b,c			a,b				a,c		

	Reward/Punishment
15	d
16	b
17	c

We indicate above the behavior and attribute categories to which the various choices for each question contribute.

B. POSTTEST

1. Your company did poorly on the first MED's, with two scores below minimum.

   a) "We could wind up last in the competition if we don't shape up. Let's try to get everything well above minimum next time."

   b) "If we don't improve, we could wind up at the bottom of the competition. Let's get everything above 3.9 next time."

   c) "We need to do a lot of improving. Let's try to get everything above 3.9 next time."

   d) "We've got to improve a great deal. Let's get everything well above minimum next time."

   e) say nothing.

2. Harris asks if his bunk is stowed properly (his blanket is not folded right).

   a) "No, your blanket should be folded like this (demonstrates)."

   b) "No, it's not right. You need to try again."

   c) "No, your blanket is wrong. Fold it again while I'm here."

   d) "No, your blanket should be folded like this (demonstrates). Now you do it."

   e) say nothing.

3. You've just had an infantry inspection, and three recruits were responsible for nearly all of the hits.

   a) "I want to see a big improvement in marching from you three men."

b) "You three S.O.B.'s had better show me a big improvement in marching."

c) Tell them tomorrow, "You three idiots need to show me a lot of improvement in marching."

d) After a while, say "You three men need to show me a large improvement in your marching."

e) say nothing.

4. Everything in Kowalski's locker is shipshape. (it's very early in training)

a) "You're doing very well, Kowalski. You'll help us on our MED inspections."

b) "You are really doing a fine job here, Kowalski."

c) "That locker looks just like it's supposed to look, Kowalski."

d) "That locker looks fine, Kowalski. It will help us on our MED scores."

e) say nothing.

5. Sanchez has his pencil clipped too low on his shirt.

a) "Your pencil is clipped too low on your shirt. Get it up there where it belongs."

b) "You've got your pencil clipped too low on your shirt. That could cost us inspection points."

c) During the next IG period, say to Sanchez, "Having your pencil clipped too low can cost us inspection points."

d) Before next inspection, say to Sanchez, "Keep your pencil clipped up where it belongs."

e) say nothing.

6. Two recruits who don't need to shave yet are asking why they have to.

   a) "It's important in boot camp that we establish a routine that's the same for everybody."

   b) "All regulations have to be followed whether they make any sense to you or not."

   c) "I thought that was funny when I was a recruit, but it's important that we have a common routine that's the same for everybody."

   d) "When I was in boot camp, I thought that was a funny rule too, but it's just another regulation that you have to follow."

   e) say nothing.

7. Attwood's towels and skivvies are folded wrong in his locker.

   a) "Those towels and skivvies aren't right, Attwood. I know you can do better than that."

   b) "That locker isn't stowed properly, Attwood. I'm sure you can do better."

   c) "Attwood, your skivvies and towels are not right."

   d) "Attwood, you do not have your locker stowed like it should be."

   e) say nothing.

8. King's bunk doesn't look real sharp, but nothing specific is wrong.

   a) "Recruit, that bunk is not neat enough."

   b) "That bunk could be neater, King."

   c) "That bunk is o.k., King."

   d) "Recruit, that bunk is good enough."

   e) say nothing.

9. The recruits are all practicing making up their bunks. You just found out that there has been a change in tomorrow's schedule.

    a) "Everybody give me your attention. The academic test that was scheduled for tomorrow has been moved to the next day. Any questions?"

    b) "Listen up, everybody. The academic test that was supposed to be tomorrow has been changed to the next day."

    c) "The academic test scheduled for tomorrow has been postponed until the next day."

    d) "The academic test that was going to be tomorrow has been moved to the next day, understand?"

    e) say nothing.

10. Last locker inspection, there were hits on skivvies, towels, and seabags; with the most hits being for seabags.

    a) "You have to start doing better on skivvies, towels and seabags."

    b) "You need to do better on skivvies, towels, and seabags; especially on seabags."

    c) "We have got to do better on our skivvies, our towels, and our seabags."

    d) "We need to improve on our skivvies, our towels, and our seabags; especially our seabags."

    e) say nothing.

11. Your RCPO, Stevenson, did very well until recently. He has seemed worried for the past few days, and he just screwed up an infantry inspection.

    a) "You really blew that infantry inspection, Stevenson. Get it together."

    b) "You've really been going downhill, Stevenson. Straighten up."

c) "You really messed up that infantry inspection, Stevenson. Is anything bothering you?"

d) "You haven't been doing so well lately, Stevenson. Is anything bothering you?"

e) say nothing.

12. There are a lot of really uncoordinated recruits in your company, and they have gotten below minimum scores on the first two infantry inspections.

a) "I'm not going to worry about getting a satisfactory infantry score. Just work on the other MED's."

b) "We need to do a lot of work on infantry. Let's get at least a satisfactory score next time."

c) "Get busy on that infantry. I want to see the score come up to at least satisfactory next time."

d) "We'd better not worry about getting a satisfactory score in infantry. Let's work on our other MED's."

e) say nothing.

13. You are explaining the stowage of locker compartment 5 to the company. They got hit during inspection yesterday because you told them that drawers go on top of the stack, when it should be a shirt.

a) "Your shirts and drawers should be alternated, with a shirt on top."

b) "You alternate shirts and drawers, with a shirt on top. I told you wrong about that before."

c) "Shirts and drawers are alternated, with a shirt on top. I told you wrong about that before. Any questions?"

d) "Your shirts and drawers are supposed to be alternated, with a shirt on top. Does everybody understand that?"

e) say nothing.

14. You are talking to the company about the first academic test, which is tomorrow.

    a) "I want to see you people get a 3.0 or better on the academic test that you are having tomorrow."

    b) "I want to see this company get a 3.8 or better on the academic test tomorrow. Any questions?"

    c) "I want to see a 3.8 or better on the academic test that is going to be tomorrow."

    d) "I want to see you get a 3.0 or better on the academic test that's tomorrow. Everybody understand?"

15. Hunter's hat is not stencilled. He's been told about it twice, once by the squad leader and once by you.

    a) "Get on the ball."

    b) "Alright, give me 20 pushups. Get going."

    c) "You can do 20 pushups for not having that hat stencilled."

    d) "I want you to get that hat stencilled as soon as possible."

    e) say nothing.

16. Your company has just had its first locker inspection. The third squad is the only one which had no hits."

    a) "The third squad can take a break for their performance on lockers. Everyone else will practice locker stowage.

    b) "Some of you did o.k. on lockers and some did not. We are going to have a practice session now."

    c) "We are going to practice locker stowage. Third squad may take an extra break tomorrow."

    d) "Alright, we are going to have a practice session on locker stowage. Third squad may take a break."

    e) say nothing.

17. You instructed the company on proper uniform for the first time today. You notice that Robbins has his notebook in the wrong pocket.

    a) "Robbins, you get no smoke breaks for two days because your notebook is in the wrong pocket."

    b) Make a mental note to emphasize notebooks next IG period.

    c) "Robbins, that notebook is in the wrong pocket, give me 50 jumping jacks."

    d) "Robbins, you have your notebook in the wrong pocket. Fix it."

    e) say nothing.

Which best describes how you feel at this moment.

1.a I'm beginning to think that I will be a lousy Company Commander!

1.b I'm beginning to think that I won't be a very good Company Commander

1.c I'm beginning to think that I will be an average Company Commander

1.d I'm beginning to think that I might be a very good Company Commander

1.e I'm beginning to think that I will be a very good Company Commander.

2.a The last job I want right now is being a Company Commander

2.b I don't think that I want to become a Company Commander

2.c It doesn't matter if I get to become a C.C., or not.

2.d I want to become a CC

2.e The only job I want right now, is to be a Company Commander.

TABLE 22. POSTTEST SCORING KEY

Question #	Goal Setting	Feedback	Instruction	Clarifying	Concrete	Considerate	Humane	Reasonable	Relevant	Timely
1	a,b,d,							a,d	a,b	
2			a,c,d,	c,d	a,d					
3	a,b,d					a,d				a,b
4		a,c,d			c,d				a,d	
5		a,b,c							b,c	a,b
6			a,c,d				c,d		a,c	
7		a,b,c			a,c	a,b				
8		a,b,c				b,c		a,b		
9			a,b,d	a,d						a,b
10	b,c,d						c,d			b,d
11		a,c,d			a,c	c,d				
12	b,c,d						b,d	b,c		
13			b,c,d	c,d			b,c			
14	a,b,d			b,d				a,d		

Question #	Reward/Punishment
15	c
16	a
17	d

APPENDIX D

DATA STRUCTURE OF EXPERIMENTAL DATA IN FINAL FORM (BBNDSET)

Mnemonic	Meaning	Loc.	Scale	Mnemonic	Meaning	Loc.	Scale
age	age	225	X/60	opmr	CC morale	63	(X+1)/2
clsr	class stdg	65	-	oppl	PLATO	64	
educ	education	229	BA=1.0	opst	mor & PLATO	62	↓
iltl	SD surv tot	231	(X+1)/2	praa	pretest-clar	3	--
inia	initial	176		prab	conc	4	--
inib	↑intents	177		prac	cons	5	--
inic		178		prad	hum	6	--
inid		179		prae	reas	7	--
inie	24	180	X=1	praf	rel	8	--
inif	behaviors	181	agree	prag	tim	9	--
inig	from	182	with	prba	G-S	10	--
inih	CC	183	MTO	prbb	F-B	11	--
inii	San Diego	184	X=-1	prbc	↓ I	12	--
inij	materials	185	dis-	prdr	pre-co drops	74	X/size
inik	survey	186	agree	prgc	data GCT aug	72	X/100
inil		187	with	prma	acad MED	43	X/4
inim		188	MTO	prmb	barr	41	
inin		189		prmd	aver	38	
inio		190		prmi	inf	42	
inip		191		prml	lock	40	
iniq		192		prmp	↓ pers ↓	39	↓
inir		193		prrp	pretest R/P	13	--
inis		194		prst	pre-co sets	73	X/size
init		195		prsz	size	75	X/120
iniu		196		prtl	pretest total	1	--
iniv		197		psaa	posttest-clar	14	--
iniw		198		psab	conc	15	
inix	↓	199		psac	cons	16	
intl	intents tot	175		psad	hum	17	
mcaa	Orl surv-clar	30		psae	reas	18	
mcab	conc	31		psaf	rel	19	
mcac	cons	32		psag	tim	20	
mcad	hum	33		psba	G-S	21	
mcae	reas	34		psbb	F-B	22	
mcaf	rel	35		psbc	↓ I	23	↓
mcag	tim	36		psdr	post-co drops	70	X/size
mcba	G-S	27		psgc	GCT	68	X/100
mcbb	F-B	28		psma	acad MED	49	X/4
mcbc	I	29		psmb	barr	47	
mcmr	morale	26		psmd	aug	44	
mcrp	↓ R/P	37		psmi	inf	48	
mctl	total	25	↓	psml	lock	46	
ncld	# co's led	230	X/20	psmp	↓ pers ↓	45	↓
nnrs	# non-r sup	226	X/25	psrp	posttest R/P	24	--

Mnemonic	Meaning	Loc.	Scale	Mnemonic	Meaning	Loc.	Scale
psst	post-co sets	69	X/size	rlig		157	(X+1)/2
pssz	size	71	X/120	rlih		158	
pstl	posttest tot	2	--	rlii		159	
ratg	rating	67	X/10	rlij		160	
riia	re-intents	201	(X+1)/2	rlik		161	
riib		202		rlil		162	
riic		203		rlim		163	
riid		204	X=1	rlin		164	
riie	24	205	agree	rlio		165	
riif	behaviors	206	with	rlip		166	
riig		207	MTO	rliq		167	
riih		208	X=-1	rlir		168	
riii		209	dis-	rlis		169	
riij		210	agree	rlit		170	
riik		211	with	rliu		171	
riil		212	MTO	rliv		172	
riim		213		rliw		173	
riin		214		rlix		174	
riio		215		rlmc	ORL sec.	112	
riip		216		rlmm	morale subs	114	
riiq		217		rlmr	morale	111	
riir		218		rlrp	R/P	126	
riis		219		rlti	SD total	113	
riit		220		rltl	total	110	
riiu		221		rqaa	RQavg.clar	85	
riiv		222		rqab	conc	86	
riiw		223		rqac	cons	87	
riiy		224		rqad	hum	88	
ritl		200		rqae	reas	89	
rlaa	RQII,clar	119		rqaf	rel	90	
rlab	conc	120		rqag	tim	91	
rlac	cons	121		rqba	G-S	82	
rlad	hum	122		rqbb	F-B	83	
rlae	reas	123		rqbc	I	84	
rlaf	rel	124		rqbt	bootcamp	81	
rlag	tim	125		rqmc	ORL sec.	78	
rlba	G-S	116		rqmm	morale subs	80	
rlbb	F-B	117		rqmr	morale	77	
rlbc	I	118		rqrp	R/P	92	
rlbt	boot camp	115		rqti	SD total	79	
rlia		151		rqtl	total	76	
rlib		152		rsaa	RQI,clar	102	
rlic		153		rsab	conc	103	
rlid	24	154		rsac	cons	104	
rlie	behaviors	155		rsad	hum	105	
rlif		156		rsae	reas	106	

Mnemonic	Meaning	Loc.	Scale	Mnemonic	Meaning	Loc.	Scale
rsaf	rel	107	(X+1)/2	Δag	tim	57	(X+1)/2
rsag	tim	108		Δba	G-S	58	
rsba	G-S	99		Δbb	F-B	59	
rsbb	F-B	100		Δbc	I	60	
rsbc	I	101		Δrp	R/P	61	
rsbt	bootcamp	98		Δtl	total	50	
rsia		127					
rsib		128					
rsic		129					
rsid		130					
rsie	24	131					
rsif	behaviors	132					
rsig		133					
rsih		134					
rsii		135					
rsij		136					
rsik		137					
rsil		138					
rsim		139					
rsin		140					
rsio		141					
rsip		142					
rsiq		143					
rsir		144					
rsis		145					
rsit		146					
rsiu		147					
rsiv		148					
rsiw		149					
rsix		150					
rsmc	RQI,ORL sec.	95					
rsmm	morale subs	97					
rsmr	morale	94					
rsrp	R/P	109					
rsti	SD sec.	96					
rstl	total	93					
shad	days shadowing	66	X/50				
ynvy	yrs in Navy	228	X/25				
ysnr	y sup non-rec	227					
Δaa	Δ pre- clar	51	(X+1)/2				
Δab	post conc	52					
Δac	test cons	53					
Δad	hum	54					
Δae	reas	55					
Δaf	rel	56					

APPENDIX E

H.0 A SUMMARY OF THE REVIEW OF HUMAN RELATIONS TRAINING MATERIALS ON PLATO.

Our first task consisted of a review of existing human relations training material implemented on the PLATO system, under the direction of Naval Training Equipment Center and University of Michigan personnel[8].

Our review was performed by a multidisciplinary team consisting of Dr. Glenn Jones, social psychologist; Dr. Donald Brown, training psychologist; Dr. George Lukas, educational technologist, Charlene Long, editor, and Harry Mairson, computer programmer. The work was reported at length in a technical report[9] and a progress report[10]. We have made a critique of the implemented materials as they presently exist and compiled a detailed frame by frame list of suggested modifications. We present below only our general review of these materials; we have given a frame by frame discussion in a separate report[9].

Areas of Review. Review activities covered the following areas:

(A) Student interactions in stepping through the materials.
(B) Evaluation of interrogatory materials.
(C) Evaluation of sequencing capabilities and routing,
(D) Evaluation of visual impact of lesson materials.
(E) Evaluation of face validity of lesson materials.
(F) Discussion of programming style and structure of the TUTOR code.

In addition, editorial comments were provided as necessary, but these only appear in the frame by frame discussion.

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[8] Hausser, D. L., Blaiwes, A. S., et al., Application of Computer Assisted Instruction to Interpersonal Skill Training, January 1976. Technical Report: NAVTRAEQUIPCEN 74-C-0100-1.

[9] Lukas, G. Review of Human Relations Training Materials, July 1975. NAVTRAEQUIPCEN Unpublished Report.

[10] Lukas, G. Progress Report for Phase I, Evaluation of Human Relations Training Program, June 1975. NAVTRAEQUIPCEN Unpublished Report.

H.1 STUDENT INTERACTION IN STEPPING THROUGH LESSON MATERIAL

Problems related to use of the NEXT key. There are a variety of "mechanical" problems with the lesson material that produce considerable confusion on the part of the student. The chief problem of this type is lack of a uniform approach when stepping through the materials; it is often unclear when PLATO is just pausing and when PLATO is waiting for a student response: press -next- or some other action. In the former case, pressing -next- often has very bad effects, causing an incorrect judgment for the next question or skipping over intermediary materials. The lesson should have "PRESS NEXT" signs at all instances where appropriate. Then the student will know when the computer is pausing for him to absorb the lesson materials, and when to proceed on his own initiative. This will make the task of using the lesson much easier for the student.

There are also instances, with or without "PRESS NEXT" signs, where the student must press the -NEXT- key several times to make the lesson proceed. This is very confusing and these occurrences must be eliminated. In addition, at the end of many frames or sections the lesson rapidly displays text, the student's last response, if any, and then the screen automatically erases before the student can digest the material, and the router moves the student to a new section. Halts and "PRESS NEXT" messages must be displayed at such points.

Problems related to use of the touch panel. Another mechanical difficulty exists in the use of the touch panel. If the student slides his finger over a small area of the panel or repeatedly touches the panel, a number of touches may be stored, to be automatically used as separate subsequent student responses when in a question or evaluation sequence. The touch panel should be disabled after each student response so that further student inputs are inhibited during the judging of that first response. As a general rule, the spot touched should be highlighted in some way so that the student knows which spot the program has responded to. While this may appear obvious, it is not trivial, for a careless "touch" may result in an answer the student didn't intend and thus provide improper feedback; this happened several times during the review process. Alternatively, the student may touch the panel in a "non-answer" area. A suitable diagnostic such as, "You should touch one of the appropriate boxes. Touch the panel to erase and try again" should respond.

Correction of incorrect responses. The response by the program to wrong answers during use of the touch panel is confusing. If the student's response is incorrect, a "no" usually appears at the upper left portion of the screen; and the student probably will not see (and may in any case not understand) this PLATO response. Insertion of -specs nookno- commands are warranted here to inhibit this dubious feedback and appropriate diagnostic messages should be generated. Following the diagnostic message, another message should add: "Please touch the screen once to erase your previous response, and try again."

Similar problems exist when responses are entered from the keyboard. If a response is judged incorrect, and diagnostic messages are displayed, the student's next action is not presently made clear. This could easily be explained by an additional diagnostic message: "Please press -NEXT- to erase your previous response, and try again." Presently, the "beep" that follows each touch has no relation whatever to the response by the program. If a student touches the panel and hears a "beep," then the assumption is made that the program has accepted the touch as an answer. In fact, however, it does not mean this, leaving the student sitting in front of the panel for some time, waiting for a response, until he decides there will not be one and touches the panel again.

H.2 EXPANSION AND MODIFICATION OF INTERROGATORY MATERIAL

Lesson generated diagnostics. Another general problem area is in the diagnostics for questions and evaluations in the lesson. There are few, if any, instances where a totally extraneous response (example: student responds '1' or 'd' where choices are a, b, and c) generates an error comment other than 'no'. The student may have no idea what he is doing wrong. A specific error response should be inserted in each question frame like: "Your response should be one of the single letters a, b, or c. Press -NEXT- to erase your previous answer and try again."

There are also many instances where the list of proper responses is not displayed prominently. For example, the student might be reviewing some yes-or-no questions. He will shortly find out, however, that typing "yes" to a question with the correct answer being affirmative will be judged "no", because the lesson wants a response of 'y' or 'n'. Uniform display of alternatives as well as proper diagnostics, as described above, should provide a solution for this problem.

PLATO diagnostics. Program modifications should also be made in many places to eliminate the 'ok' and 'no' messages generated by the PLATO judging sequence. These messages should be replaced by specific, diagnostic feedback from the lesson that is relevant to the asked question. Where this feedback already exists, the essentially superfluous 'ok' and 'no' messages can only serve to confuse the student. For example, in y-or-n questions, the student could type 'n' (no) and have PLATO judge it 'ok'. Does this mean that "no" is the correct response, and PLATO is saying so, or that it is an incorrect response, and the correct one is "ok" (yes)? These 'ok' and 'no' responses can be very ambiguous. They should be eliminated through insertion of a -specs nookno- in relevant areas of the lesson code.

Length of multiple choice responses. We have noticed a tendency in the question sequences for the correct response to be the longest one. An example of this occurs in Question 3 of the pretest:

Type the letter of the response you think is best, then press -NEXT-.

3. Kowalski's locker is shipshape.
    a. say nothing
    b. "That locker would get you a good score at locker inspection, Kowalski."
    c. "You're not as big a jerk as I thought."
    d. "Keep up the good work, Kowalski."

Although "d" is an acceptable answer, "b" appears to be the best answer, as well as being the most verbose. This tendency gives the impression that the ideal CC is extremely verbal and wordy. While being wordy may be an effectual characteristic, it may be a difficult model for many of the students to emulate. We therefore suggest that an effort be made to randomize the length of correct responses relative to the other responses that are offered. Response "b" above, for example, could easily be shortened to "Kowalski, that locker is 4.0 easy."

Aggregation of student responses. With the exception of the materials in the "Decision Making" lesson, an evaluation is never made of how well the student responded in a question sequence. An evaluation of aggregated responses and specific feedback to the student about his overall performance could prove useful. An example of this type of evaluation appears in our review of Frame 7, Lesson 3, "Introduction to Program."

H.3 ROUTING OPTIONS

There should also be modification to the student routing mechanisms of the current materials. At present, sequencing is strictly linear, and no material can be repeated. Implementation of more complex routing options can greatly facilitate student review and restudy. Student options might include:

(A) A student-controlled option for repeating current section or any previous section.

(B) A student-called help sequence in the form of an index of important concepts, or glossary, perhaps with examples of application to various situations.

(C) Lesson-controlled routing without changing the base unit, based on evaluation of aggregated student responses.

H.4 VISUAL IMPACT OF LESSON MATERIAL

Another general area for improvement is in the visual impact of the lesson material on the student. There are several excellent animations in the present lesson material, and this trend should be continued. The lesson material would also appear to be more interesting if more use were made of frame headings and borders, and if texts were centered more carefully. It is very easy to be bored or partially distracted in front of a display terminal, especially after an hour or more. The urge is not to think, but rather to keep pressing keys and make the lights flash. For that reason, the frames should be as visually appealing as possible to retain student interest in their contents.

Display of large quantities of text also has a negative effect on the student. Large texts tend to overwhelm, wear out, and finally bore. For this reason, large paragraphs should be broken up into smaller ones of two and three sentences each, with "Press -NEXT-" pauses in between.

One improvement to the appearance of the question material could be to introduce and force micro blocks in student responses. The student would get directions such as "Type 'y' or 'n'." The micros of 'y' and 'n' would be 'yes' and 'no'. This could be implemented in many other situations in the lesson where single letters are used for longer responses.

H.5 FACE VALIDITY OF HRTP MATERIALS

Description of infrastructure. A number of methodological questions also exist as to the lesson material and its approach to the relevant subject matter. Based on our visits to RTC in Orlando, we are concerned that the lesson materials produce a distorted picture of the company infrastructure and command hierarchy. The lesson material pictures the Company Commander (CC) in a role that emphasizes his intimate involvement in day-to-day common occurrences on a recruit-by-recruit basis, rather than stressing his responsibilities as a decision maker and executive officer. This image is strengthened by the fact that his subordinates are not prominently included in the context of the training material. The RCPO, the RPOs, Master-at-Arms, and the Yeoman are casually mentioned a few times. The platoon leaders and squad leaders are not mentioned at all. Interactions between the CC and these personnel, this infrastructure, and even more - interactions within the infrastructure are largely ignored.

Use of terminology. The psychological terms used in the lessons serve a purpose in being useful, short, nonloaded descriptors of various types of behavior. To many students, however, they may initially be completely unintelligible and confusing, and can be so even if one understands the types of behavior that these terms represent.

It is suggested that more occurrences of these terms in the lesson text be supplemented by the more common and longer English descriptors. Thus, "Is the CC being RELEVANT?" might be changed to "Is the CC being RELEVANT by explaining why the recruit must learn this?", etc. Changes like this would make more accessible the basic concepts that the student must learn.

Use of anger. Throughout the training program, there is continuous demonstration of CC interaction with his recruits and, in many cases, what he should say to them in various situations A consistent pattern of such behaviors and statements on the part of the imaginary CC tends to build up in the mind of the CC taking the training course the image of the type of person that the Navy command wants him to be. The training program never really permits the CC to get angry. Anger is only contained in responses that the program considers unacceptable. In fact, such bland behavior, if consistently practiced by a CC, will almost inevitably lead to severe discipline problems.

Such a consistent pattern of the forever reasonable CC has a number of disadvantages. (1) The imaginary CC isn't credible.

This weakens the messages that the program is trying to get across, especially when he compares the PLATO materials with the real-life situations he sees when shadowing. (2) The student CC can't use the presentation as a realistic model. No CC can deal with recruits day in and day out and not blow his cool once in a while. The training program should not stifle anger, but should channel it appropriately. (3) Anger, properly used, is an effective tool; this model deprives the CC of that tool.

An example of when a little less cool would be helpful is in Lesson 40, Frame 4, where a recruit is having trouble with the Master-at-Arms Cook. The CC has told the recruit to go to the Master-at-Arms to define the problems and for both of them to come back to him. After two days, the CC finds out that the recruit hasn't talked to the Master-at-Arms yet. The four choices given are:

a. "Hey, don't come to me with your problems anymore. I told you what to do with Cook and after 2 days you haven't done it yet."

b. "How come you haven't come to see me with Cook yet? I think you ought to take care of these problems early."

c. "Have you seen Cook yet about your problem?"

d. "One thing you've got to learn is, that in the Navy, when you get an order, you do it. Now don't let me see you again until you've had a talk with Cook."

Note that b. is the only correct answer and it is also the "coolest". The second part of answer a. "I told you what to do with Cook and after 2 days you haven't done it yet," is a good answer. It follows several of the suggestions made throughout the training program to be straightforward. Yet, it is in an unacceptable answer. A combination of answers a. and b. would do the trick: "I told you what to do with Cook and after 2 days you haven't done it yet. You ought to take care of these problems early, before they really mess you and the company up."

H.6 PROGRAMMING STYLE

Router program. The router program could probably be written in substantially less space than it presently occupies. The code of the lesson frames is presently scattered over ten or so lesson workspaces in a more or less random manner. By taking advantage of the basically linear structure of the lesson as a whole, and organizing the code in a similarly linear manner in these lesson workspaces, the majority of the -jumpout- commands could be eliminated.

The critical routing units of the router should be available at all times. This could be done by inserting a -use- command at the beginning of the ieu (initial entry unit) of each lesson workspace. Jumping between lesson workspaces would then be greatly reduced. These changes would also make the code much more readable.

Shortening and readability of code. There are a variety of changes that would shorten the code and probably reduce the storage needed for it when condensed, and would make it neater as well. Examples of two such possible modifications of this sort follow.

Far more extensive use of subroutines could be made, as the basic form of much of the lesson material is similar, especially the formats for questions. An example of such a modification is a rewrite of a question sequence in Lesson or#19, blocks c and d. The basic structure of the rewritten code is in lesson bkn, block 2-d, "Orlando." This rewritten code uses subroutines for all repeated actions in the question sequence and the code is roughly 30 percent shorter, not counting added subroutines that improve the frame.

The basic structure of the new code is as follows: unit timmatch sets up the screen, and calls unit tques 5 times, once for each question. Unit tques contains the judging logic for asking one question, but applies to all questions. This unit calls as subroutines units tmess(n), tched(n), and untouch. Unit tmess writes the n^{th} question; unit tched(n) highlights the n^{th} box when touched; unit untouch erases the highlights from all boxes.

We have suggested a number of diagnostic and standard messages to be introduced into the training material. These would best be written as subroutines, perhaps with associated variables to specify where the messages should be written. Thus, unit pnext(n) would write "Press -NEXT- to continue" at screen location n.

PLATO variable names (like v3 or n7) should be totally eliminated, and mnemonic variable names introduced for them. This makes the code far less mysterious. The consequent insertion of a -define- command will also provide a prominent list of lesson variables, and important and crucial ones can be tagged with explanatory comments.

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